U.S. Coast 6000 Oceanographic Report

UNITED STATES COAST GUARD

OCEANOGRAPHIC REPORT No. 57

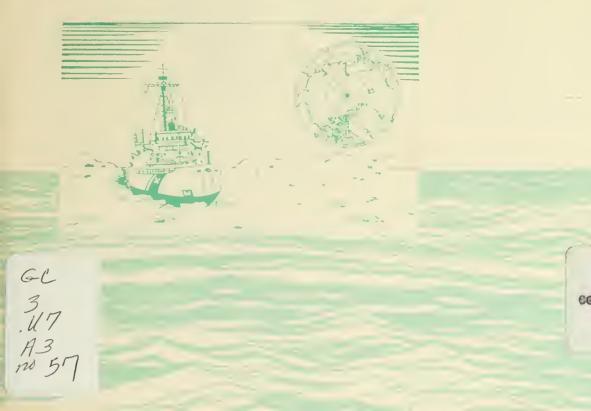
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OCEANOGRAPHIC CONDITIONS IN NARES STRAIT

August-September 1970



OCEANOGRAPHIC



REPORT No. 57 cg 373-57

OCEANOGRAPHIC CONDITIONS IN NARES STRAIT

August-September 1970

Martin J. Moynihan



USCGC WESTWIND (WAGB 281)

ABSTRACT

Oceanographic observations from the CGC WESTWIND in the Nares Strait region during August and September 1970 are presented. Observed temperature-salinity characteristics are discussed in relation to the interchange of water between the Arctic Ocean and Baffin Bay and the formation of Baffin Bay Deep Water. An average northward transport of 0.48 x 10⁶m.³/sec. from Smith Sound into Kane Basin was computed and is compared with previous transport calculations. The relationship of tidal and wind conditions to the volume transport is also discussed.

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OCEANOGRAPHIC CONDITIONS IN NARES STRAIT AUGUST-SEPTEMBER 1970

Martin J. Moynihan 1

INTRODUCTION

Nares Strait is the system of channels and basins between Ellesmere Island and Northwest Greenland, connecting Baffin Bay with the Lincoln Sea and Arctic Ocean (fig. 1). It includes (from south to north) Smith Sound, Kane Basin, Kennedy Channel, Hall Basin, and Robeson Channel. Since 1950, several Canadian oceanographers (Bailey, 1957; Collin, 1965; and Dunbar, 1951) have reported on cruises into Nares Strait to present their data and compare the results with the classical expeditions of the Danish GODTHAAB and CGC MARION in 1928.

Coast Guard vessels have also conducted several surveys into Northern Baffin Bay and Nares Strait to investigate the flow of Arctic Water through this channel. The results of surveys by CGC EVERGREEN and CGC EDISTO in 1963 and 1966 respectively have been reported by Franceschetti et al. (1964) and Palfrey and Day (1968). During August and September 1968, 1969, and 1970, the CGC WEST-WIND conducted oceanographic surveys in northern Baffin Bay under the auspices of the Baffin Bay-North Water Project, coordinated

by the Arctic Institute of North America and including groups from the University of Washington, U.S. Coast Guard, McGill University and Dartmouth College (Muench, 1971b). CGC EASTWIND and CGC SOUTHWIND completed oceanographic surveys in Kane Basin in September 1968 and 1969 respectively with field parties from the Coast Guard Oceanographic Unit and Naval Oceanographic Office on board (Moynihan, in press).

During August and September 1970, CGC WESTWIND conducted an oceanographic survey from Inglefield Bay on the western coast of Greenland, through the Smith Sound-Kane Basin region and into Kennedy Channel, Hall Basin, and Robeson Channel (figs. 2 and 3). This survey was a combination of two projects at the Coast Guard Oceanographic Unit: first, a continuation of an investigation of the iceberg producing glaciers on the western coast of Greenland and second, a continuation of the 1968 and 1969 surveys in the Nares Strait region to investigate the interchange of water between the Arctic Ocean and Baffin Bay.

DATA ACQUISITION AND PROCESSING

Temperature data and water samples were collected by Nansen casts. The water samples were analyzed on board with inductive salinometers. The conductivity values obtained were converted to salinity by use of the *International Oceanographic Tables* published jointly by UNESCO and the National Institute of Oceanography of Great Britain (1966). Water sam-

ples were also collected and frozen for later determination of inorganic phosphate, nitrate, nitrite, and silicate at the Coast Guard Ocean-ographic Unit using the techniques described by Strickland and Parsons (1968).

The temperature data were processed at the Coast Guard Oceanographic Unit following the procedures specified in the U.S. Naval Ocean-

¹ Coast Guard Oceanographic Unit, Building 159-E, Navy Yard Annex, Washington, D.C. 20390.

ographic Office Publication No. 607 (1968). Paired protected thermometers were used on each bottle with unprotected reversing thermometers added on the deeper bottles. Sampling depths were determined from L–Z curves based on thermometric depth and wire angle. All calculations were performed on a PDP-5 digital computer utilizing programs described by O'Hagan (1964). Volume transports were computed using the method of subdividing each oceanographic section into solenoids for computations as described by Kollmeyer (1967).

Data were also obtained on 10 stations using a Bissett-Berman Model 9060 self-contained salinity-temperature-depth (STD) recorder. The STD data were quality controlled by comparison with temperatures and salinities obtained from deep-sea reversing thermometers and water samples collected at the surface and just above the STD at the bottom of the cast. An average quality control correction for the STD stations was determined from the differences between the STD data and the associated quality control samples and was applied to the raw data from the recorder.

The data presented in the Tables of Ocean-

ographic Data (app. A) are reproduced from computer listings from the National Ocean-ographic Data Center (NODC Cruise Numbers 31–8184 and 31–1705). Anomalies of dynamic height in the listings were computed by NODC, but all discussion of dynamic heights in this text is based on computations made at the Coast Guard Oceanographic Unit. Dynamic heights in water shallower than the reference level were computed in a manner similar to that of Helland-Hansen (1934), as described in detail by Kollmeyer (1967).

The survey and glaciological data from 27 glaciers will be published in a separate Coast Guard publication after the analysis is completed. Glacier fronts were charted, and benchmarks were established at survey stations wherever possible for reference during future surveys. Records were kept on ice movement and calving and on iceberg distribution around the glaciers and in the fjords and bays. Photographic overflights of the major glacier fronts were conducted by a Coast Guard HC-130 aircraft equipped with a T-11 aerial camera. Ship's helicopters were used to obtain oblique and vertical photographs of all glacier fronts.

DISCUSSION

The interchange of water between the Arctic Ocean and Baffin Bay takes place through Nares Strait, Jones Sound, and Lancaster Sound (fig. 1), but this flow is restricted due to limiting sill depths of 250, 175, and 180 meters respectively (Bailey, 1956). Nares Strait is the deepest and most direct path for this interchange and is of major importance in determining the water and heat budgets of the Arctic Ocean and Baffin Bay. The general bathymetry of Nares Strait consists of a narrow, deep channel running along the western side of the strait with a sill at 250 meters in central Kane Basin (fig. 4).

Previous investigators of the eastern Arctic have noted that waters at about 250 meters have characteristics (-0.3° C., 34.4°_{00}) similar to deep water found in Baffin Bay and have hypothesized that this water flows over the sill in Kane Basin and sinks to the bottom in Baffin Bay. Bailey (1957) and Collin (1965) concluded that this is not a continuous process

but probably takes place as an intermittent pulsing. Muench (1971a) suggests that this method is less common than previously indicated, and he upholds the theory of Sverdrup, Johnson, and Fleming (1942) that Baffin Bay Deep Water is formed by a mixture of Labrador Sea Deep Water and Baffin Bay Surface Water whose salinity had been increased sufficiently by freezing to cause the water to sink.

Examination of the water characteristics observed in Nares Strait in 1970 (figs. 17 and 18) shows water with the proper temperature-salinity relationship (<-0.3 °C., >34.4% (a) at 200 meters at station 20 over the sill in Kane Basin and at 300 meters at station 19 just south of the sill. However, water of proper salinity for deep water formation was not present in the passage between Kane Basin and Smith Sound. The distribution of salinity and density through Nares Strait (figs. 18 and 19) suggests the presence of an isopycnal wave of denser water overflowing the sill in Kane

Basin, Collin (1965) and Palfrey and Day (1968) interpreted similar density distributions as supporting a pulsing flow of high salinity Arctic Water into Smith Sound.

High salinity water of Atlantic origin ($>0^{\circ}$ C., $>34.7\%_0$) was found below 300 meters in Hall Basin (figs. 17 and 18). This Arctic Intermediate Water is also effectively blocked from flowing southward into Baffin Bay by the shallow sill at 250 meters in Kane Basin.

Cold water of polar origin ($<0^{\circ}$ C., $<34.0^{\circ}_{00}$) was found in the upper 200 meters throughout Nares Strait (figs. 17 and 18). This water makes up the major drift southward into Baffin Bay. Water having a temperature less than -1.50° C. was present to a depth of 75 meters in Hall Basin and to between 25 and 50 meters further south in Kane Basin.

A section across the southern end of Nares Strait was occupied three times in rapid succession from 3-5 September 1970 in an attempt to monitor the volume transport between Kane Basin and Smith Sound (fig. 2). Each occupation consisted of 6 stations, and the three occupations were completed in approximately 38 hours. The reference level for geostrophic calculations was selected based upon the deepest usable set of observations on each occupation. The results of the volume transport calculations are presented in table I.

Table I. Volume Transport From Smith Sound into Kane Basin.

Stations	Date	Mean Temp	Net Transport (x10 ⁶ m. ³ /sec.)
1 to 6	_ 3-4 Sep 1970	-0.73	10.574
7 to 12	_ 4 Sep 1970	- ,93	² .319
13 to 18	_ 4-5 Sep 1970	76	.558
Average		81	.484

¹ Reference level 500 decibars.

An average northeasterly transport of 0.48 x10°m.3/sec, between Smith Sound and Kane Basin was computed from the September 1970 observations. This average transport is biased due to the shallower sampling on the second occupation of the section that necessitated a shallower reference level for those calculations. Moynihan (in press) computed an average southward transport of 0.42 x10°m.3/sec, through this same section in July 1969.

These values agree with the results of the previous investigators in this region and

further substantiate the variability of the flow through Nares Strait. Collin (1965) cited Killerick's calculations of a 0.42 x10°m.³/sec. southward flow in August 1928 as the earliest estimate of the exchange through Kane Basin. Bailey (1956) found an average northward transport of 0.42 x10°m.³/sec. based on four sections in Smith Sound during August 1954 and Collin (1965) estimated an average southward transport of 0.24 x10°m.³/sec. based on five September sections from 1962, 1963, and 1964.

The variability of these geostrophic flow calculations indicates that the exchange of water between Kane Basin and Smith Sound is affected by frictional effects of the wind and bottom and the effect of tidal oscillations, as well as by uncertainties of the geostrophic method in shallow water.

To examine the tidal effect on flow from Kane Basin into Smith Sound, profiles of sea surface dynamic height from CGC WEST-WIND stations 1 through 18 were compared with the times and heights of high and low water at the Port Foulke (78°18′N., 72°45′W.) tide station (fig. 23), The Oceanographic Atlas of the Polar Seas, Part II (U.S. Naval hydrographic Office, 1958) shows cotidal lines progressing from Baffin Bay northward into Kane Basin indicating a northward tidal current on the rising tide. Although each occupation of the section between Kane Basin and Smith Sound occurred on a falling tide, a northeasterly geostrophic flow was calculated, suggesting either a lagging effect between the tidal phase and geostrophic flow or a reduced northeasterly flow due to the tidal current. Collin (1965) noted that ship drift records in 1962 indicated that in the center of the passage there was a southwesterly set of 0.5 to 2.0 knots during the falling tide and an equally strong northeasterly set with a rising tide.

Day (1968) reported that direct current measurements near 78°27′N, in Smith Sound in 1963 indicate a circulation dominated by semidiurnal tides with a net transport to the south. Muench (1971a) reported that current measurements from a fixed ice camp in Kane Basin indicate a general southward flow with occasional flow reversals coinciding with the diurnal tidal currents.

A progressive wind vector diagram (fig.

Reference level 300 decibars.

24), drawn from the surface wind observations of CGC WESTWIND at stations 1 through 18, was examined to study the effect of surface wind on the flow from Kane Basin into Smith Sound. A relatively steady wind (mean 10.0 kts. from 055° T.) with velocities varying from 4 to 15 knots was observed. This would induce a surface current transport to the southwest and would reduce the northeasterly flow into

Kane Basin. However, based on all information available, it is felt that permanent and tidal current effects would predominate, particularly when the winds were at such a low velocity.

The results of these observations indicate that year-round direct current, tidal and meteorological measurements are required to completely describe the total water circulation in this Nares Strait region.

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FIGURE 1. Geographic locations in the Nares Strait-Baffin Bay region.

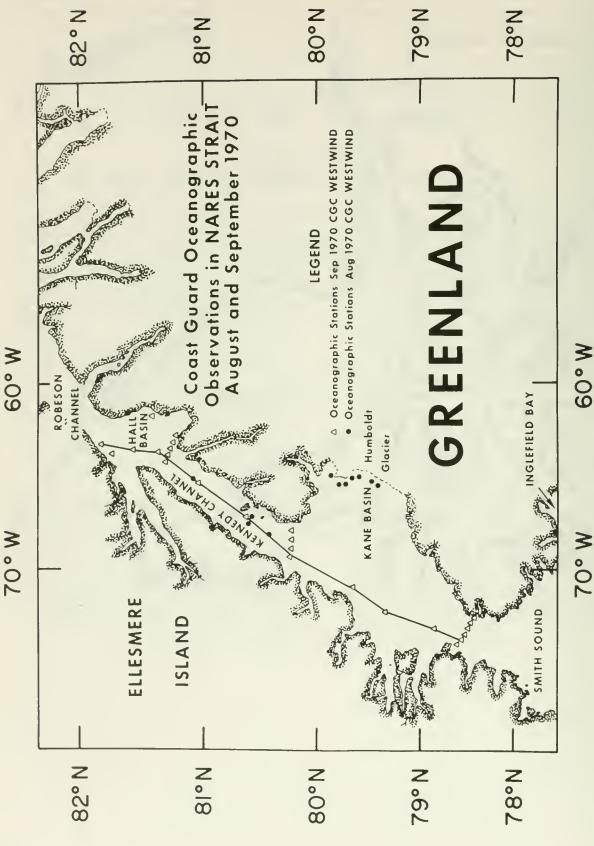


FIGURE 2. Positions of CGC WESTWIND oceanographic stations in Nares Strait during August and September 1970.

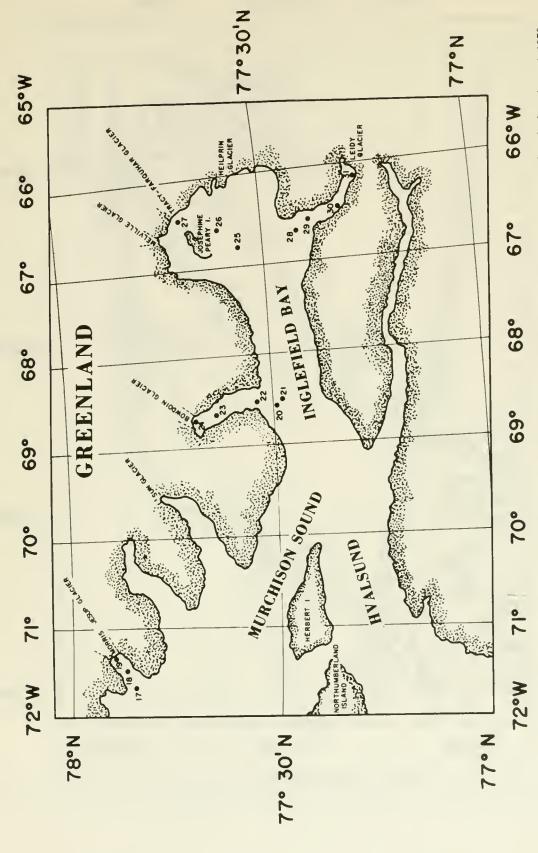


FIGURE 3. Positions of CGC WESTWIND oceanographic stations in northeastern Baffin Bay-Inglefield Bay region during August 1970.

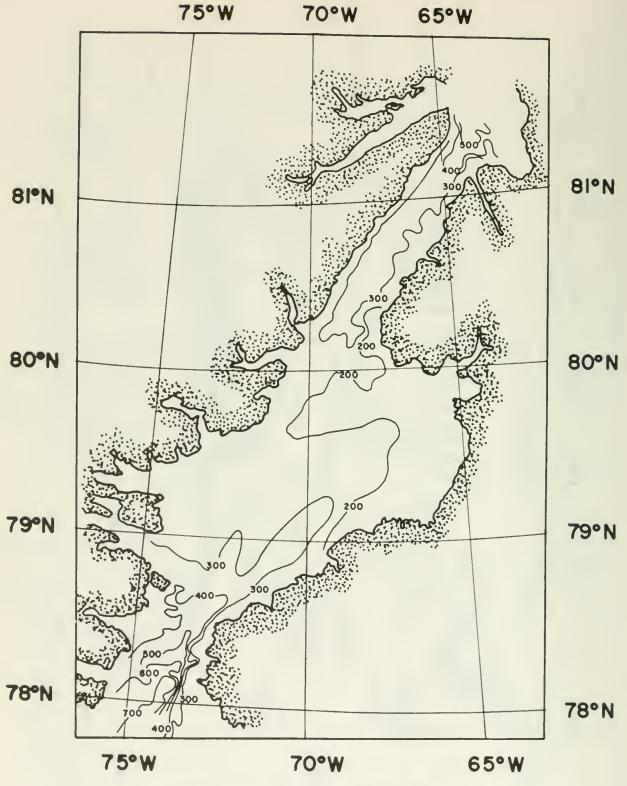


FIGURE 4. Bottom topography of Nares Strait.

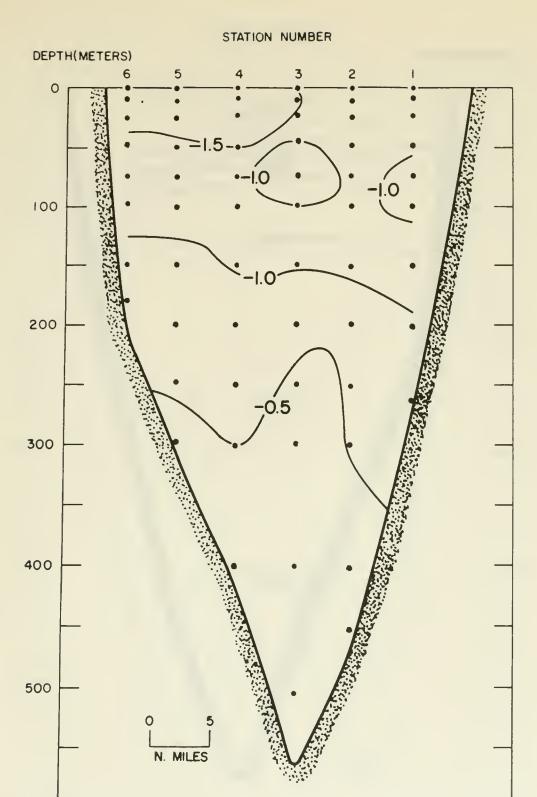


FIGURE 5. Vertical distribution of temperature (° C.). CGC WESTWIND stations 1 through 6, 3-4 September 1970.

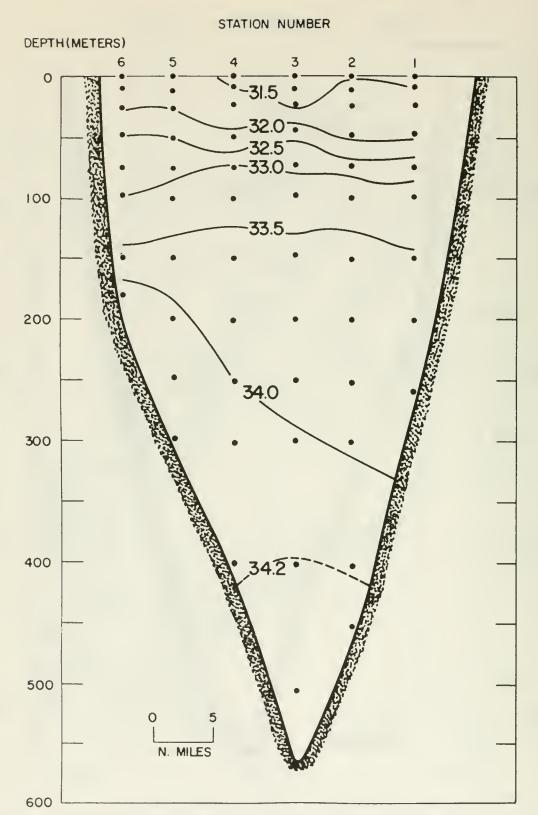


FIGURE 6. Vertical distribution of salinity (%). CGC WESTWIND stations 1 through 6, 3-4 September 1970.

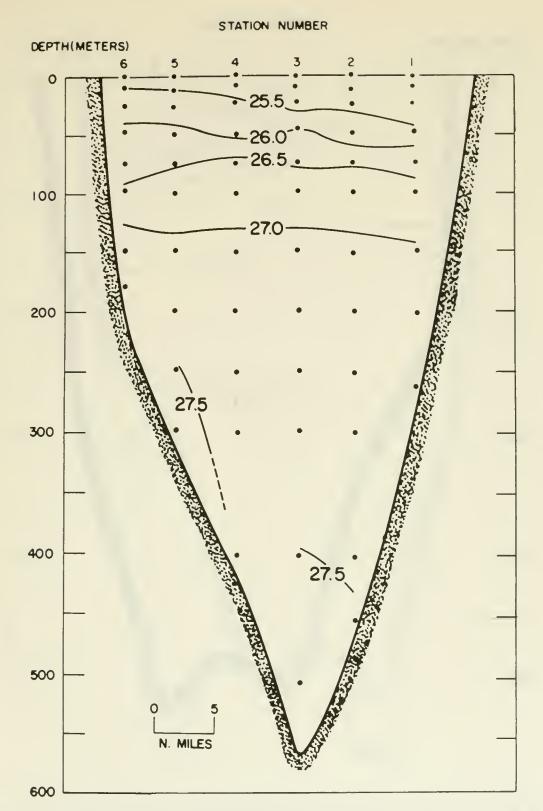


FIGURE 7. Vertical distribution of density (σ_t). CGC WESTWIND stations 1 through 6, 3-4 September 1970.

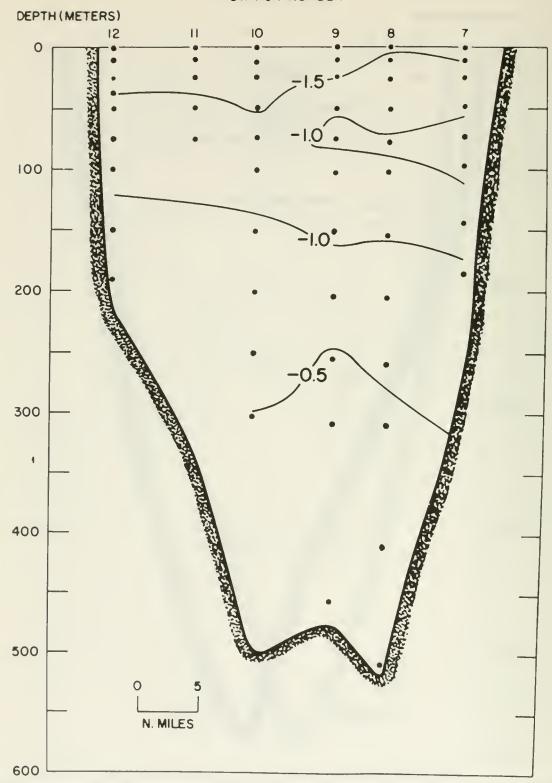


FIGURE 8. Vertical distribution of temperature (° C.). CGC WESTWIND stations 7 through 12, 4 September 1970.

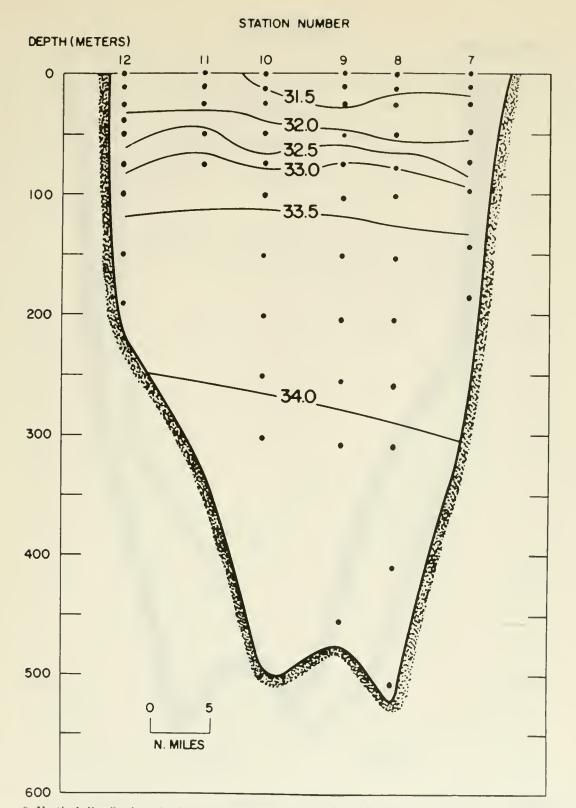


FIGURE 9. Vertical distribution of salinity (%). CGC WESTWIND stations 7 through 12, 4 September 1970.

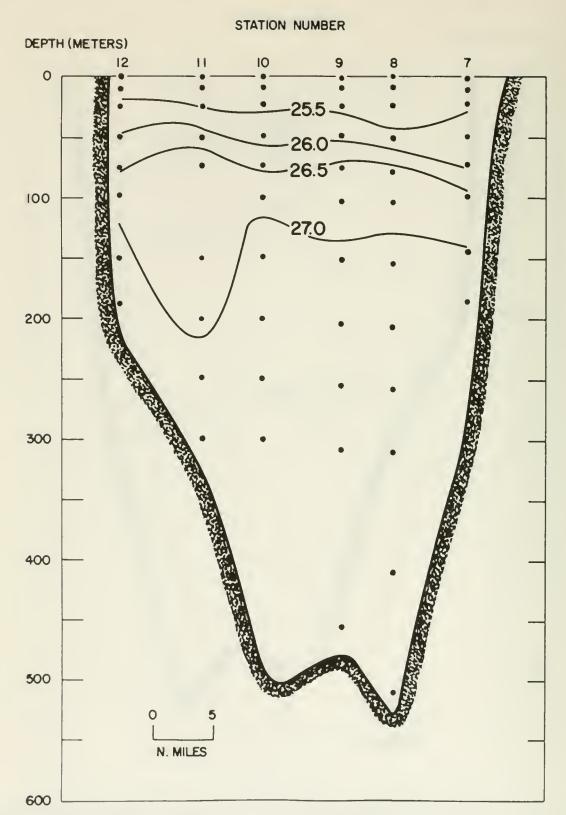


FIGURE 10. Vertical distribution of density (ot). CGC WESTWIND stations 7 through 12, 4 September 1970.

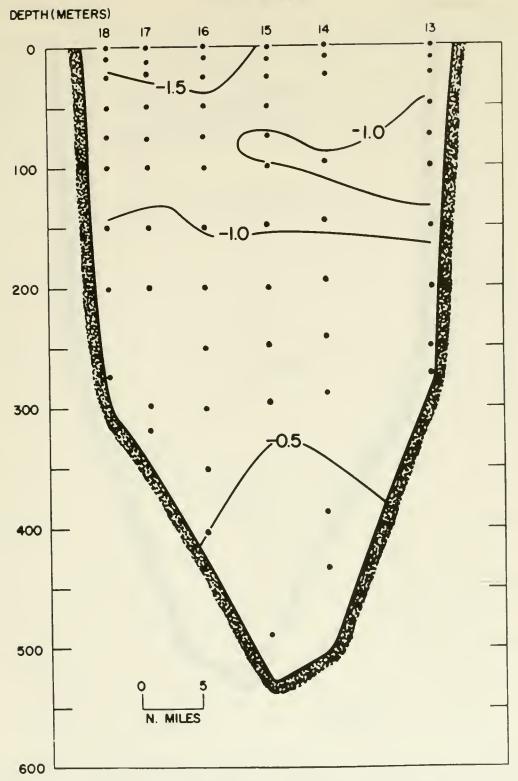


FIGURE 11. Vertical distribution of temperature (° C.). CGC WESTWIND stations 13 through 18, 4-5 September 1970.

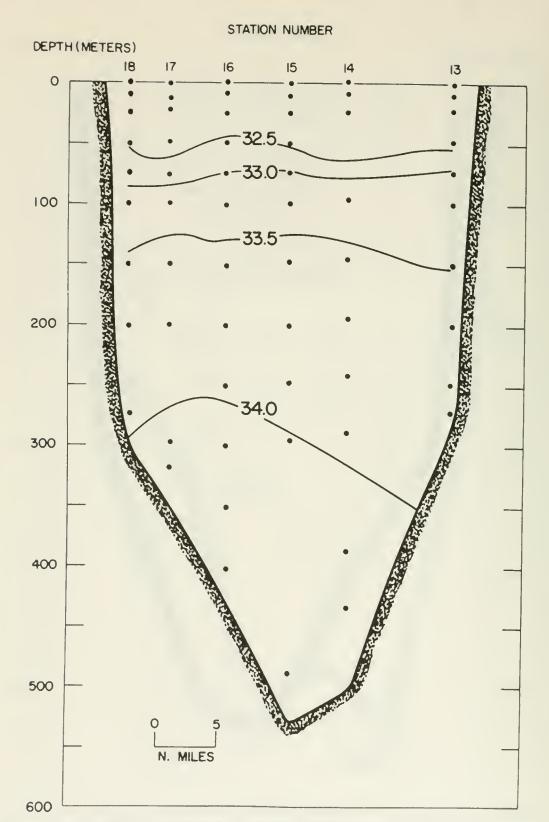


FIGURE 12. Vertical distribution of salinity (%). CGC WESTWIND stations 13 through 18, 4-5 September 1970.

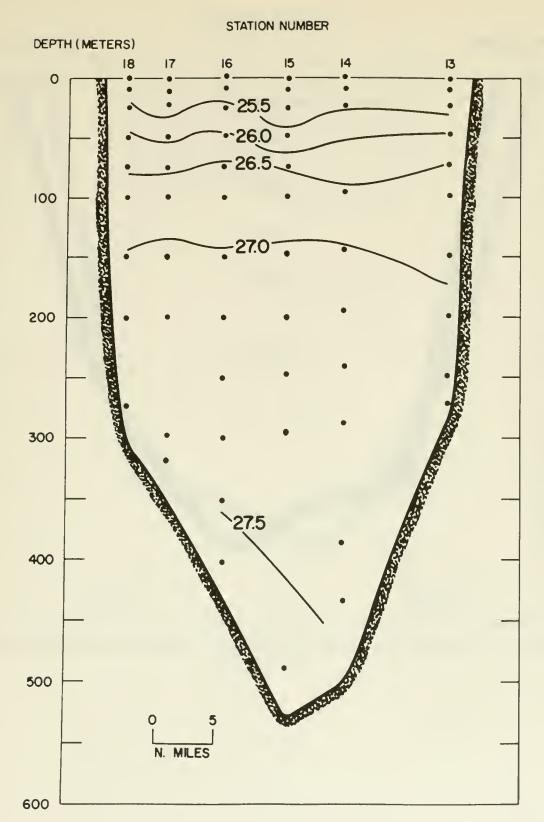


FIGURE 13. Vertical distribution of density (σ_t). CGC WESTWIND stations 13 through 18, 4-5 September 1970.

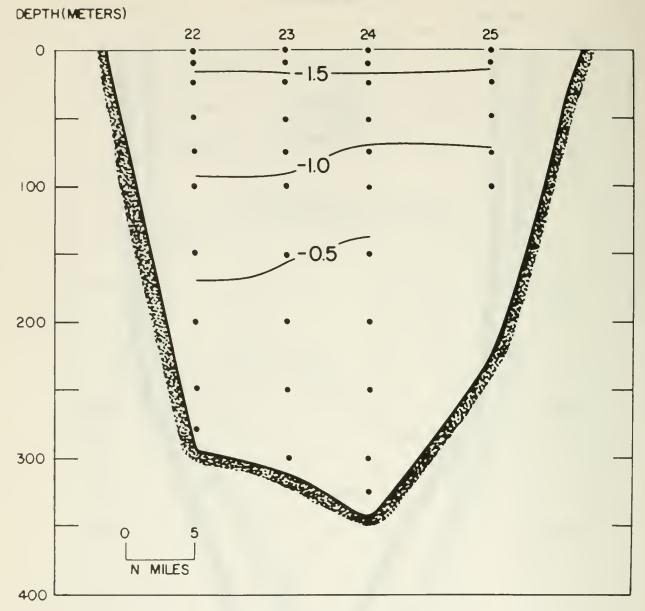


FIGURE 14. Vertical distribution of temperature (° C.). CGC WESTWIND stations 22 through 25, 5-6 September 1970.

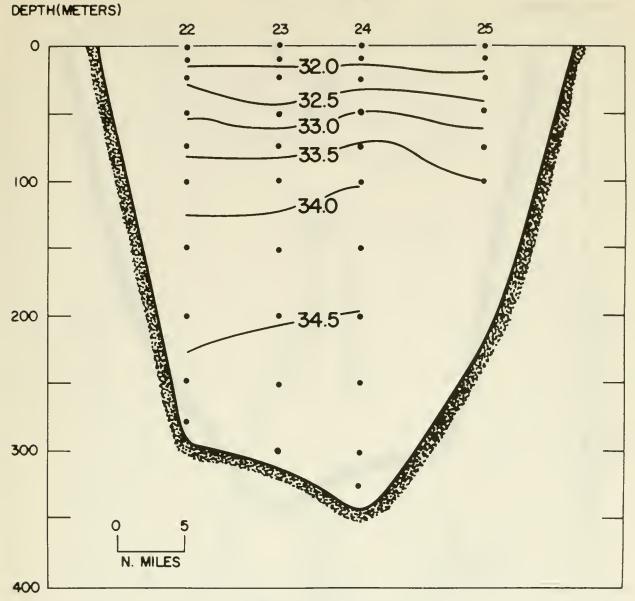
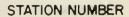


FIGURE 15. Vertical distribution of salinity (%). CGC WESTWIND stations 22 through 25, 5-6 September 1970.



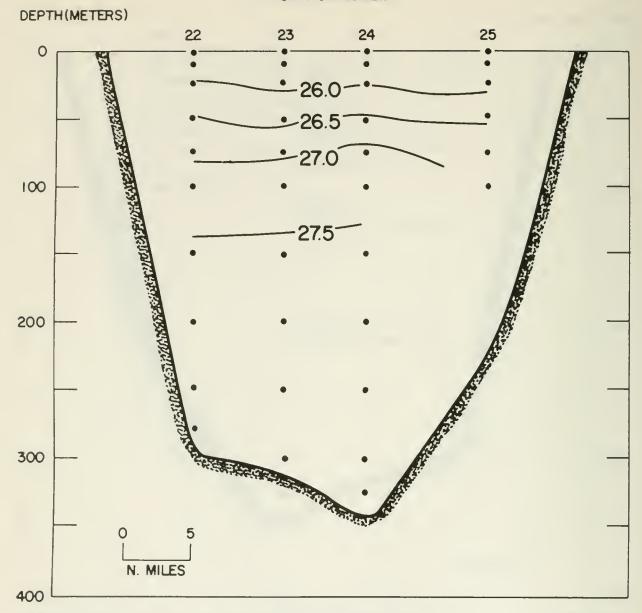


FIGURE 16. Vertical distribution of density (σ_t). CGC WESTWIND stations 22 through 25, 5-6 September 1970.

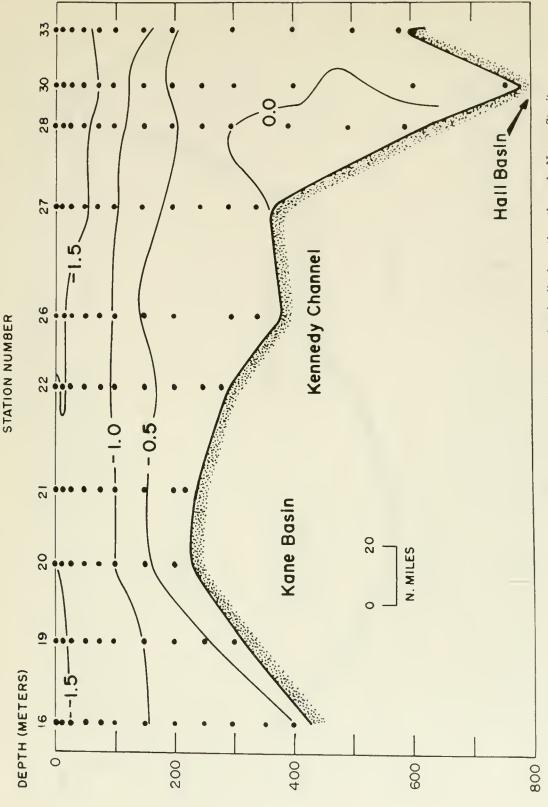


FIGURE 17. Vertical distribution of temperature (° C.) along a longitudinal section through Nares Strait, CGC WESTWIND survey, 5-9 September 1970.

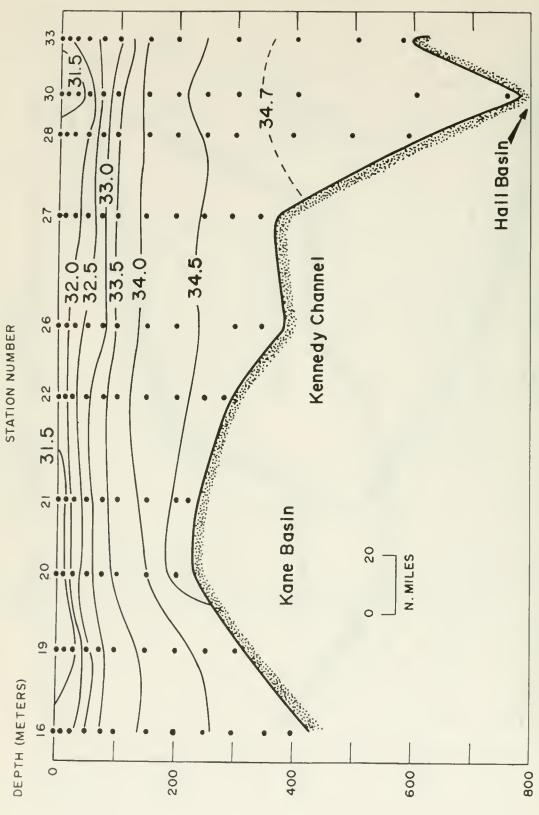


FIGURE 18. Vertical distribution of salinity (%) along a longitudinal section through Nares Strait, CGC WESTWIND survey, 5-9 September 1970.

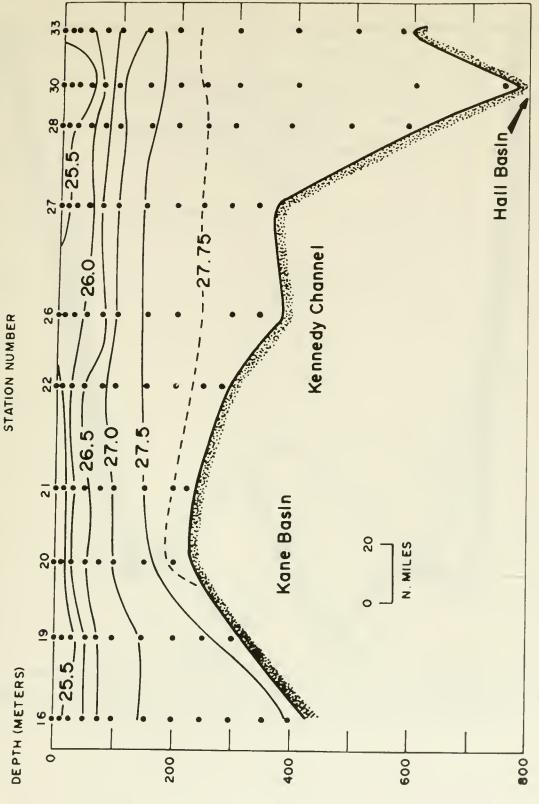


Figure 19. Vertical distribution of density (σι) along a longitudinal section through Nares Strait, CGC WESTWIND survey, 5-9 September 1970.

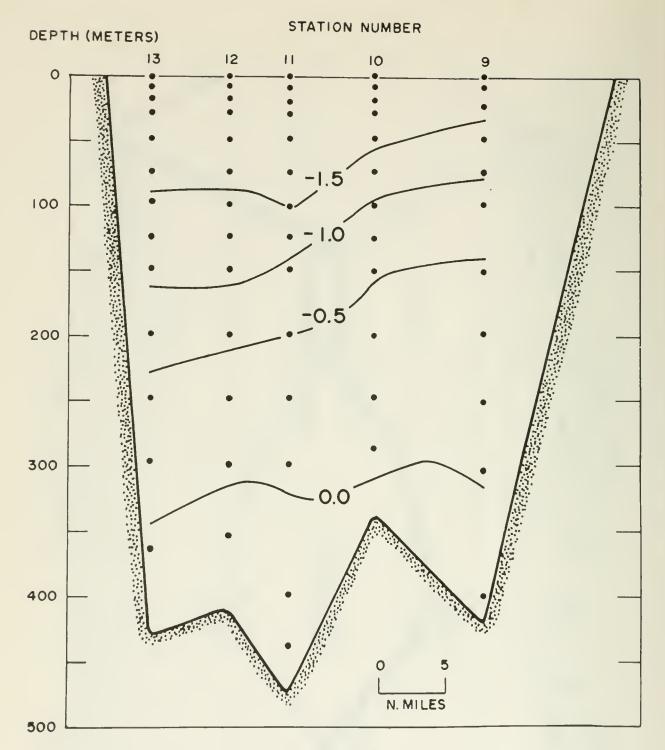


FIGURE 20. Vertical distribution of temperature (° C.). CGC WESTWIND stations 9 through 13, 19-20 August 1970.

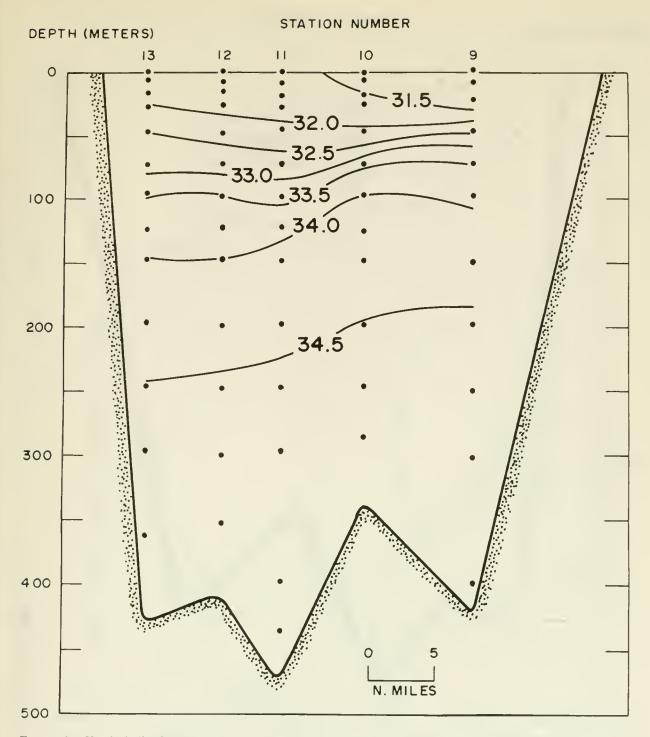


FIGURE 21. Vertical distribution of salinity (%00). CGC WESTWIND stations 9 through 13, 19-20 August 1970.

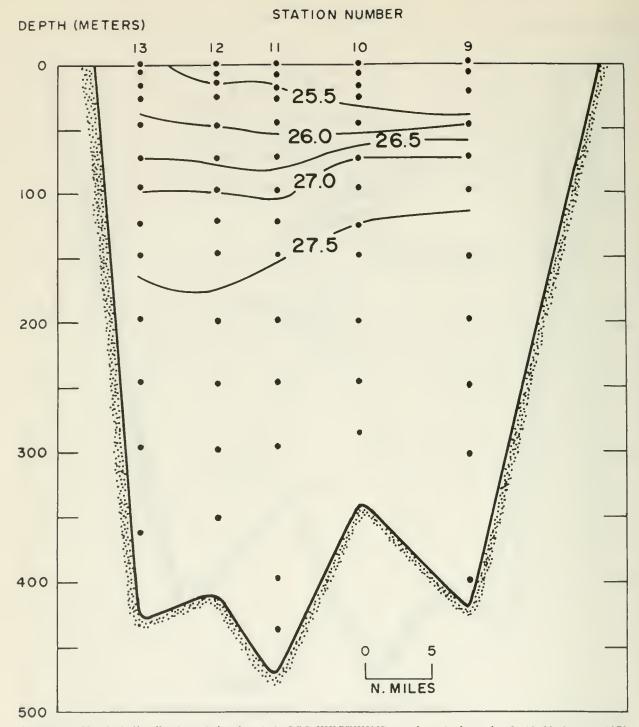


FIGURE 22. Vertical distribution of density (σ_t) CGC WESTWIND stations 9 through 13, 19-20 August 1970.

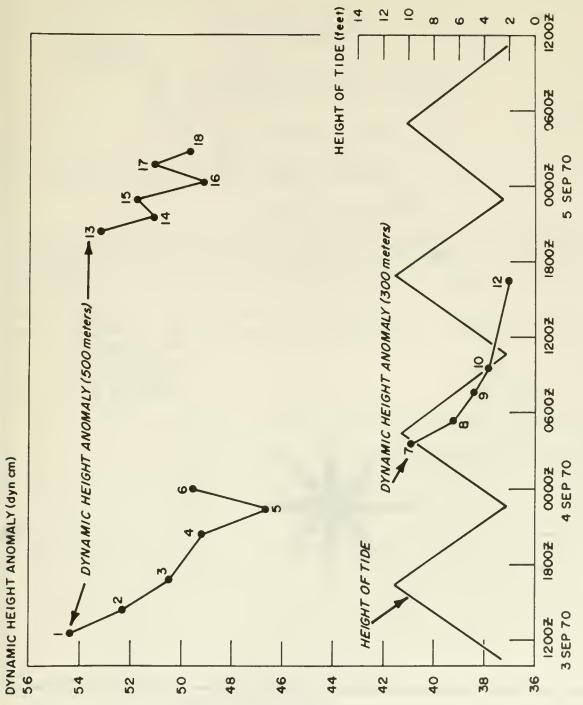


FIGURE 23. Anomaly of sea-surface dynamic height of CGC WESTWIND stations 1 through 18 and the height of tide at Port Foulke, Greenland tide station, 3-5 September 1970.

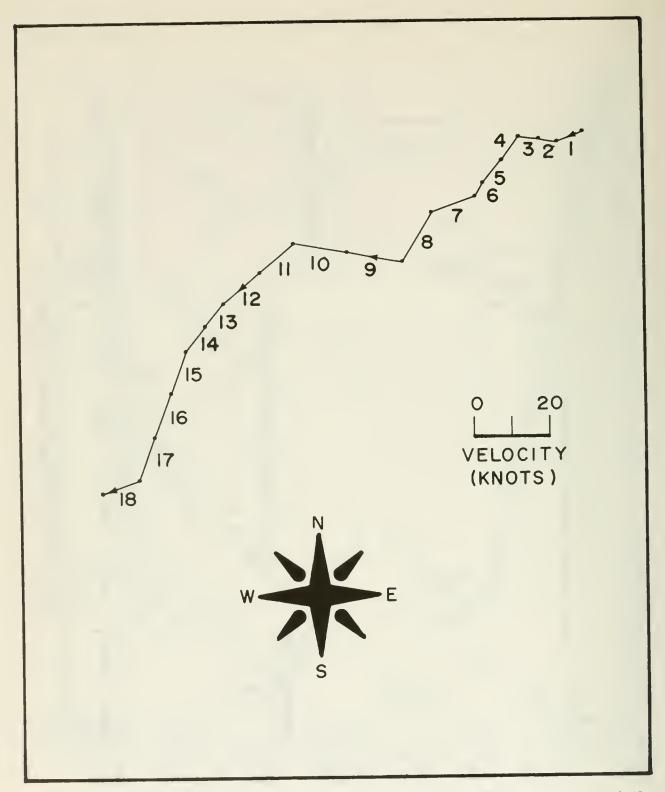


FIGURE 24. Progressive vector diagram of surface wind velocity at CGC WESTWIND stations 1 through 18, 3-5 September 1970.

APPENDIX A

OCEANOGRAPHIC DATA

CRUISES LISTED

Table	Page 31
II.—CGC WESTWIND, Aug	tember 1970 46
	CODES UTILIZED
National Oceanographic Da graphic Stations. (Rev. Aug	of the codes utilized in the tabulation of oceanographic station data can be found in ta Center publication M-2, Processing Physical and Chemical Data from Oceanoust 1964, supplement issued May 1966.) oceanographic station data listing, entry headings which are not self-explanatory are
Depth to Bottom	Corrected or uncorrected sounding in meters.
Max. Depth of Samples (if 2 digit code)	Depth of deepest sample in hundreds of meters to nearest hundred-meter interval. For internal use only.
DNP (if I digit code) Wave observations:	
DIR	Rounded to nearest multiple of 10 degrees.
HGT	Increments of $\frac{1}{2}$ m. Sum of 5 meters plus increments of $\frac{1}{2}$ m if 50 is added to direction.
PER	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry of 2X (numeric entry) +1. For other entries see WMO Code 3155.
SEA	Sea state according to WMO Code 3700.
Weather Code	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud Code:	
Type	Cloud type according to WMO Code 0500.
Amount	Cloud amount in eighths. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water:	
Color Code	Color according to Forel-Ule scale.
Trans.	Transparency in whole meters as determined by Secchi disc.
Wind:	
Dir	Rounded to nearest multiple of 10 degrees.
Speed or Force	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.
Barometer	Barometric pressure given in tens, units, and tenths of millibars,
Air Temp. ° C	Air temperature to tenths of a degree Celsius.
Vis. Code	Visibility according to WMO Code 4300.

No. obs. depths _____ Number of observed levels associated with the station.

Messenger time	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.
Card type	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.
Depth (m.)	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; Z indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
Т ° С.	Temperature to hundredths of a degree Celsius.
S %	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.
Specific-volume	Multiply entry by 10^{-7} to obtain specific-volume anomaly in eubic centimeters per gram.
ΣΔD Dyn. M. × 10 ³	Multiply entry by 10-3 to obtain anomaly of dynamic depth in dynamic meters referenced to the sea surface.
Sound Velocity	Sound velocity according to Wilson's formula to tenths of a meter per second.
O ₂ ml./l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO ₄ -P μg-at/l	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P μg-at/l.	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO ₂ -N μg-at/l	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO ₃ -N μg-at/l	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO ₄ -Si μg-at/l	Silicate-silicon in microgram-atoms per liter entered to whole units.
рН	

TABLE I.—Observed and interpolated oceanographic data from stations occupied by USCGC WESTWIND, 16-24 August 1970, prepared from NODC Listing No. 31-8184.

9094 (E) 198 (E)	-		SHIP	LATITL	IDE	LONGITUDE	1616	MAP SQU		STATIC	ON GMTJ	TIME	11	AB	CPUISE		STATIO		DEFIN	848 148913			WAVE PVATI		-	WEATHER	CLON				NODC STATION
CABL		mare .	1000		1 10	1 1 1) ° 8	10,	1 1	HIMO	DAY	HB V10	Z		nit/mable		PRIN LIM	•	MOTTOM	/100	Did		K) TPI I	144	183		TYPE A	uT.			NUMBER
31	81	184	WE	7920	N C	06539	N	259	95	08	16	001	1 1 9	970	WGS	00	1		0091	2	0	0	O X			Х2	6 8	1			0001
	we11	THE PL	on Name	t rea mine	mi (1,1179)	e= 617 0851P410 510	al para	(975) 164	'DT	*S" _D	-	WIND		BAROM	ernt =	TEMPT P		VI\$	NUMBER OSS	SPEC											
		10 minut	BANKS 51	ESTE PENDS	FR 0 741	MPEN			WATER	TRANS	DIR		DR DR	{mins	Der	SULB	WEF B	IULB KODE	IF YELS	DBMPYA	TIONS										
											11	3 51	18	96	4 -01	10	-02	2 7	07												
			CAST and	Total	CA			T		-	-				SPECIFIC	VOLUE	wž	FAD		PUTED			Add \$15 P	HT LIC	SHT						SURFO SOUP
			-	-	T 171	DEPTH	(m)		r °C	5 '	**	5	IGMA -	7	AN OMAI	r a 1	10 '	2 10 °		SEC C) ₂ m1	1	PO,	-		41 P 10 /J	HO ₃ — N	HO ₃	N st/I	5- 0 ₃ ~	Si aN
						TD 00	00	-0	010	05	73	(1450		0228	321	0	0000	14	091					,						
			007	, '	0.8	s ' 00	00	-0	010	05	734	· (0456	, '			,		14	091			01	6		1		0.0	00	006	
					S	CC 01	10	-0	119	31	57		2541		0025	580	6	0127		391											
			007	,	08				119		57:		2541							391			05	4				0,	2 3	013	
						00			142	32			2605		001	965	2	0149		393										015	
			207	,	08				149		65		2029							395			0.8	5 L				06	58	015	
					_	00 01			148	32			2638		001			0167		398											
					_	00:			143	33		-	2608		0013	312	3	0198		409			0.6	. a				0.5	56	015	
			007		90				143	33			206t 2687		0011		2	0230		421			00	0				0.	0	017	
			007	,		00 01			134	33			2667		001	102	,	0230		421			0.8	1 7				0.	75	017	
			007		08 08				121	33			2638							430			0.8					_	72	017	
			307		06				121	2.3	2 1 1		_ 0 ~ 0	,									3	_					_		

BIRT CRUISE BIRT CRUISE BI NUMBER	SHIP CODE	LATITUE	D€ -1/10	LONGITUE	7	5 HAE 5QU	AFL		GMT	TIME HB 1:10	TEAR	CRU		STATIC NUMB		DEPTH TO BOTTOM	w	1		WAVI SERVAT	IONS		WEATHE MODE	Ci	STR OUD AMT			NODC STATION NUMBER
318184	WE	7726	N	05522	W	259	95	06	16	034 1	970	WG	55 00	12		0210	o ;	2	00	0	(X2	6	8			0002
		II 700 BYANG ASTORNAS W		BICALIT DENEMS APPLAR	Minas Bati	, 1 (975) WH	*DT	SUD TRANS	-	SPEED OF FORCE	BAFOr (mb	N II B	NE TEMPT	T	"C VIS	NUMB I		SPI CIA										
									22	\$16	97	6 -	-003	-00	9 7	07												
	CAST DURATE	ON	CAL	ro			7 °C			SIGMA		SPEC	MIC AOF	JME	PAD M	3	MPUTE KOUND		-1 (* April Brit	NT SH	Geet .						SURED SOUR
	M/Vaga	Enmil CASI	PY	n Der	4 (m)		1 . (,		SIGMI		ANO	MALY - 3	10'	2 10 ²	4.6	HOCH		,, .	PO,			AL -P	MG _j :		NO ₃ N	\$103-	
			5	TU 6	2.0	-0	005	25	12	20	99	00	680	37	0000	1-	+30	7										
	039	, '	ำกุ	s o	00	-0	003	20	121	20	9 9	1		,		14	436	7		0.	74	,				000	013	
			5	TO 0	10	-0	113	31	93	25	74	0.0	2261	10	0045	14	440)										
	239	9	OB		16		113		988							_	440			0.8	31					052	017	
					120		118	32		261		0.0	191	5∾	0066		440	_								_		
	33	9	ŭŀ		125		121		t.15								440			0	32					064	017	
					3 3		126	32		26.			167		0094	-	443											
			S		150	_	143	33		261		00	11309	20	0114		+40			0.1						04.5	016	
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	0.3		0 is)75)75		135	33	321	26		1	1122	. 0	0147	_	441			0.8	2.6					070	017	
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	() 5	4	114		00		124		-98			00	12.07	* 2	0110		443			0.8	49					079	016	
	0,5				25		105	33		271		0.0	0037	5.2	0201		4441				,					/		
	039	2	UB		25		105		to J				, , , , ,	_	0.01	_	444	-		Ů.	5.5					083	043	

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MA 187 1	-	SHIP	LATITUO	e l	LONGI	TUDE:	5 3	3QU		STATIC	ON GMTI	TIME	TEAS	Н	CRUISE	SIPER TO	fiON	-	DEPTH	SM SM	. V	O	WASSE WAY			-	CLOUD	-		NODC
	PUISE UMBER	0006		1,10		1.10	* #	10.		HTHEN		HB 1/10			Charles		m 3d 9		10170m		/10	Del	HGTP	19 Jul	ME	1000	EVPE AN			NUMBER
318	184	WE	7932	N	0550)4 w		259	95	00	15	176	197	0 1	HGS	003			0226		2	00	0	K		X2	6 8			0003
7	- 1		'				2	•	°DT	*5°	Τ,	WIND		-	AIR TE	ari sati	/Pt "C	Ĥ	HUMAN B		SPECIA		7 ·							
	-	COST NAMES	ATT TOR GRAPHS PERSONAL PE		MITTER TELEVISION	PRE WOLL	Bals d	FT); 6 M	WATER	I BANS		SPEED) METE (04)	DAY BO	na wi	1 BULE	KODE	240 10/013	1	A BYAT									
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		887/104	68 100 CAST 1 10 THO	FYF	4	DEPTH (A	n j		1 °C	,		3004		A.	H OMALT -	0 (0)		10,		SEC SEC	10	,	PO,	- P ut /1	IOTA PRO		NO ₃ = N eq. str1	HO ₃ = H	5-0 ₃ -5-	μН
		101	110	5	TO	000	0	-0	002	04	66	03	69	1	0236	770	00	000	14	08	3				1					
		17	6	06		000	0	-0	002	04	661	0.3	69	1			1		14	08	3 '		0	16	1 .	,		000	001	1
		-		S	TO	001	0	-0	127	31	85	25	63	(0023	576	0	130	14	392	2									
		1.7	6	08	S	001	0	-0	127	31	846	25	63						14	139	2		0	32				037	013	
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		1.7	6	08	S	002	5	-0	118	32	646	26	2.7						14	409	9		0	50				038	018	
				S	TD	003	0	-0	126	32	78		3.8		0016			169	_	+401										
					TO	005	-	-	143	33			71	(0013	425	0	199		40										
		1.7	6	08		005			1 4 3		171		71						-	.40			0	48				047	021	
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		1.7	0	08	_	007			127		366		36						_	142			0	64				092	026	
					10	010	_		112	33		-	02	1	0010	394	U	259		443			0	, ,				053	014	
		1.7	6	OB	_	010			112		575		02		00.30	. 2.	_	211	_	4431			0	46				053	014	
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			,		TO .	015			081	33	798		19	,	0000	110	U	306		46			0	65				095	029	
		17	0	OR	-	015			180		90		27		0008	16.3	0	348		140 448			0	ری				0,,,	02)	
		1.7		_	10	020			065		898		27		0003	003	J	J= 0	_	48	_		0	72				122	034	
		17		OB		020 020	-	_	364		914		128						_	448	-			65				100	025	
		17	_	0R	-	020			1052	2.3	714	- 21	20							+ + 0				0)					027	
		1/	0	OR	2	020	9	-0	26.01																					

MATTY CPUISE ON HUMBER	SHIP LATIT	JDE LC	ONGITUDE S	SQUARE	STATION TO (GMT)	ME YEAR		TION ILOU B	DEFIN 10 BOTIOM	MATU /		MAVE SERVATION		MEATHE!	CLOUD TYPE AM			NODC STATION NUMBER
318184	WE 794	1 N 06	5508 W	259 95	08 16 2	10 1970	WGS 004		0293	2	00	0 X		X1	66			0004
* 100 941	PLANE TEAPTER THE REAL ST. BARRES DV STRIPTAS	POR ESSETATORISASES SPORTO TARE NIPER	r parityona labini dada	PTI ME LOT	TRANS DIR	SPEED BARON OR (mb		AL	NUMSER OBS LEVELS	SPECIA								
					15	S02 01	0 006 0	000 7	09									
	GLE LEAS		Diam iwi	r.c	5	SIGMA - T	SPECIFIC VOLUME ANOMALY I ID	DTM (w VELO	CITY 0	1 -1	PO ₄ =	P 10		NO ₃ - N	NO ₃ N mg at it		OBTO SOU OCIET = H
		STO	0000	0064	2072	1064	0107924	0000	143	27								
	'210	08.5	0000	0054	20721	1064			143	27		01	6			000	020	
		STU	0010	-0045	2703	2172	0050947	0085	5 143	53								
		510	0020	-0120	3140	2527	0027085	012	9 143	90								
	210	088	0024	-0140	32613	2625			143	98		05	8			056	026	
		STO	0033	-0.41	3278	2639	2016475	015	1 144	01								
	210	OB S	0049	-0162	33172	2071			144	10		05	6			064	029	
		STU	0050	-0142	3313	2671	0013344	013	1 144	10								
	210	DBS	0074	-0133	33408	2640			144	21		04	7			058	040	
		STO	0075	-0152	3342	2690	0011557	021	2 144	22								
		STD	0100	-0112	3359	2703	0010303	023	9 144	38								
	210	088	10124	-0098	3 3 7 3 5	2712			144	50		06	3			100	024	
		510	0125	-0049	3371	2713	0005421	0.26	4 144	50								
		STO	0150	-00 -0	3376	2716	0007052	029	7 144	59								
	210	OBS	10174	-00:2	33812	2720			144			04	9			065	040	
		\$10	0200	-0072	3347	2120	0009122	0330	144	78								
	210	ORS	0324	-0179.3	13033	2733			144			04	6			069	018	
		\$10	0250	-0050	3328	2733	0007459	036	7 144	95								
	210	08.\$	0263	-0050	33990	2734			145	0.0		061	0			106	020	
	210	OBS	10274	-0343	33419	27 +3			145	0.5		061	0			095	020	

100 HT 0 W	SHIP	LATITUDE	LON	NGITUDE	2 2	MARSOEN		IME	0	PIGHATOR	,	DEPTH	au		WAVE	T	* INSTR	T	Т	NODC
CRUISE NUMBER	CODE	1 10		1 10		SQUAPE	IGMT	TEAT	CPUISE NUMBER	STAT	FION MBER	DT MOTICH	1000		ERVATIONS	MEATHE MEATHE	CLOUD STPE AMI			STATION NUMBER
318184	WE	79489N	06	5130 m	2	59 95		19 19	-	005		0256	2	00	0 X	X2	7 8			0005
all Libra	1514E THE S	11 (00 S149) ME 1710	TEORNALIT (DESERVE SERVE	8618 (875)	T D LE	TRANS DIE		POMETER (mbs) DRY	EMPIRATU	F BUID COD	NUMBER OBS	SPECIA	- 1						
						COLOR	0.7	PORCE			06 7	10	08318421	TORIS						
	CAST	Time!	APD		-	-			SPECIFIC		140	COMI	PUTED		AMBIENT LIGH	eT .				UPTD SOUND
	M LUGAN		Pret	DEPTH IN	*1	1 °C	3	SIGMA 1	AN OMAL!		0 10 t	VELC	MC O	,	PO ₃ = P ing #P 1	Man I	NO ₃ N	HO ₁ N		OCIPE mison
	019		\$10 88	000		-00U2 -0002	2080	1671 1671	0109	223	0000		297		020			000	015	
			STO	001	0 -	-0128	3193	2570	0022	987	0066	141	392					000	013	
	014		ย ร s ro	001	_	-0128 -0136	31935	2570 2612	0013	047	0087		392 397		051			005	016	
	013		HS STD	0025 0030		-0139 -0139	32648 3277	2628		E1	0107		400		053			065	021	
			STO	0351) .	-0139	3316	2670	0016		0104									
	01		8 S S TO	005		-0139 -0131	33163	2670 2690	0011	585	0166	144			061			069	022	
	019	Oi	B S	0075	5 -	-0151	33413	2630				14-	+22		057			085	021	
	019		STD BS	0100		-0120 -0120	3357 33572	2702	0010	1371	0193	144			040			075	021	
			S T D S T D	0129		-01/15	3368 3370	2710	3009		0218									
	019	UF	RS	1015) -	-0092	33757	2715				144	+58					152	030	
	019		S F O 3 S	10200		-0073	3386 3385 7	2724	00.09	345	0285	14-			069			119	037	
	019 019			0240		-0061 -0059	33915	2723				144	189		073			140	026	
	015	0.0	3	0242	_	0057														
	1 1																T	_	-	
COM NUMBER	CODE	LATITUDE . I ID		GITUDE	2 3	OUATE	STATION TI	TEAB	CRUISE	STATE NUM	ON	DEPTH 10 BOTTON	344 346/1	OBSE	PVATIONS	WEATHER	CLOND			NODC STATION
318184	WE	7950 N	065		25			42 197	_	006		0139	2	-	OTPRE WAS	X2	7 8	_		0006
W and were	SURE TIMESAT	tor maries suffit	FORTCALLT OF	name ana	9412 (975) w	"DT	*S". w	NO BAR	A/R TE	MPTEATUE	H °C VIS	NUMBER OBS	SPECIAL		' '	'	' '	'	1	'
M APP E	Ki eMRI II	Printers was to	ET MPLES			COLOB	TRANS DIE	PORCE	mbil D#Y 9		FULL CODE	LEVELS	OBSERVATIO	2MO						
	CASI	T Land				1	07	539 0	14 00		140	0.8 COMP			AMBIENT LIGH	1.				URED SOUND
	MINERS		ARD YPE	DEFIN (m)		f °C	5	SIGMA T	SPECRIC		101 F	VELO M	CUA 07	mt 1 -		OFAL P	NO ₃ -N	NO ₁ -N	5.0,-5	pN 1910
		S	10	0000		0021	2437	1958	0081	513	0000	143	37			ag ar 1	ang ar I	ug et/l	Light of I	
	042	08 S	S FO	0000		0021 0117	24372 3193	1958 2569	0023	069	0052	143			021			005	017	
	042	08	S	0010	-	0117	31928	2569				143	97		044			000	024	
	042	0B	STD S	0020	-	0135	3234 32512	2617	J019	007	0073	143			054			061	024	
			T0	0030		0141	3266 3313	2629	0017		0123	144								
	042	OH	S	0050	-	0141	33125	2667				144	10		075			114	034	
	342	S 08	S TU	0075		0144	3341 33410	2690 2690	0011	574	0155	144			066			123	029	
	042	S U8	10	0100		0133	3351 33514	2698	0010	794	0183	144			070			076	024	
	042	06	S	10120	-	0121	33588	2704				144			059			071	020	
	042	08	S	0122	_	0119														
1000 (81 (8 AD	SHIP	LATITUDE		GITUDE		M3029A	STATION TH	ME	CRUISE	GINATOR		DEFTH	EAI MERI		WAVE #VATIONS	WE ATHER	"INSTR		T	NODC STATION
318184		7952 N	054		25		OH 17 1	52 197	0 WGS	007		опон 0100	2		O X	X1	TYPE AMI			0007
		THE BEAM REPORTED	1	1	1			ND	AIR TE	MPERATUR		NUMBÉ R	SPECIAL		-1,"	1 ^4	1 - 1'			550,
III 40-1	61 BARDE 61	AUTORIUS AMBEL 144	EL PARTO		- see (Aut) M	WATER	TRANS DIE		mbs) Day &	ULB WET	BUTB CODE	OBS IEVELS	OSSERVATIO	DNS						
	CAST	tent I					17	506 0	18 01	0 0	01 7	07							-	PED SOUND
	DUPATION OF THE PROPERTY OF TH		r PE	DEFTH (m)		F °C	5 "	SIGMA - I	SPECBIC V		DTN M ± 10.7	SOU VELQ	CHEA 0.3	m1 1 1	tum cm	1	HO ₁ N	HO ₃ =N	1 AFFC	CITY = set
	и, (TO NO S	TD	0000	-	0011	1428	1147	0160	228	0000	142				ing or T	-10 -1	mg car/1	ыр el/I	,"
	152		S 1	0000) '	0011	14283 3194	1147 2571	0022	- 1	0091	142	05		007	•		003	020	
	152	08	S	0010	-	0136	31943	2571				143	89		057			024	028	
	152		STO SS	0020		0141	3240 32594	2608 2624	0019	345	0112	143 143			057			039	027	
			TO To	0030	-	0149	3272	2635	0010		0130	143	97							
	152	U8	S	0050	-	0157	3313 33134	2668 2668	0013	010	0161	144	02		079			071	027	
	152		S	0075		0141	3340 33405	2639 2639	0011	620	0193	144			074			081	026	
	152	98	S	10035	-	0141	33480	2676				144			073			087	048	
	1.52	08	2	0087	-	0141														

METER CHUISE	SHIP	LA TITUD	1.10	lON	GITUD		MC174	10°		STATE	GMT)	TIME	TEAB		EUISE Dek		O4 S FATION Umbje		D(P)	>	MZ SMPU 1117		DASEFY	ATIONS		MEVINES	CLOU)		NODC STATION NUMBER
318184	WE		N	067		pi	+	907		\rightarrow	-+	130	197			600	_		035	-	2	Dia U	-	PH N	- 141	×7	0 9			0008
210104	l ac	0037		001	12	"	- 1	701	1	-	-		7 21	y r					0),	,0		00	4	10	- 1	^ *	ין ט			10000
		.10 100 Et Mr M			NMt 1	MENAL B	a1 k /B	Tij iski	*DT	*S"	1	SPET	BARC	me te	-	T	1041	VI\$	NUMI Ob:	.	SPECIA									
40 April	W1 BARRS C	o esteenas we	emo (Mer	MAIN THE					COLOR	[RAN]	Drift	FORC		des J	D#1 BL	A 9 1	wil BU	KODE	HVE		DRSERVAT	IONS								
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	CAST	Time!					_			-	1	1		T			7	3 4 0	1	COMPU			* AM	BRN1 D	GHF.					MEASURED SOUN
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			ST			0114		362		270		001	JUS:	u.	163	_	4433										
			CBS			0114		362 407		270 274		000				_	+433										
			085		_	0093	_	407		274		0000	00/4	· U.	184		4454 4454										
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894	81 0 0	SHIP	LATITU	DE	LONGITUDE	2 50 2 50	#SDEN		TIME		00	GINATOR	5	DEPIH	ш		WAVE	WLAT	INSTR			NODC
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							OT	SO 24	\$03	0.8	2 -00	3 -0	04 7	14								
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				ST			0170	3183		03	0023	691	0074									
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				ST			0115	33 94		32	0007	572	U224									
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100 01 0 M	SHIP	LATITUDE	LONGITUDE	S MARION	STATION TIME		ORIGINATOR		DEFIN BA		WAVE	WEATHER	"INSTR		HODE
COMPLET CRUISE	CODE	1 10	1.10	3 9	(GMT)	TRAS	CBUPSE SEAT		10	~	DESPENATIONS	1000	CLOUD TYPE AMT		NUMBER
	WE	81186N	064110W	-		*	WGS 012			2	00 0 x	X2	0 9		0012
313184	ME [0110011	004110#		4- 4	4y	WG3 012	* *c	0411		00 01 1	A 2	1012	- 1	0012
* 407 777	tion transit	FOR SEASON SLECTED		D	3 4	-	1		10,000FFF CRS	10TC LALL					
0.001	mi adme et i	Para Sent Cal	- umai	COM	to Marris per	CM J Imba	a par eve well	BULLE CO	id recs Ont	Menalic	HS.				
				DT	SO 19 S	04 08	5 003 -0	01 7	14						
	CAST	uni uni			-		MACING ADMINI	2 40	COMPUTE	0					WEED SOUN
	BURATED	-	DEPTH VI	is fic	5	SiGma - E	ANCINET 1 10	Ditto at	SOUND HELOCITY	0,	at (m - P T	WO ₁ -W MO	-N S.OS	OCIFE m/w-
	#15949 / #: 1	10 THO	^			+		3 10	-			01		1 m an 1	" pH
			TO 000			2539	0025924	0000							
	013	08				2539			14378		065		0:	30 029	
			10 001			2545	0025406	0025							
		0.8				2545			1436						
			TO 002			2567	0023302	0050							
	001	80				2567	00007777	0073	14370						
		OB.	TO 0030			2572 2572	0022757	0073	1437						
			10 005			2607	0019434	0115							
		0b				2607	0013434	0112	1438						
			10 007			2651	0015292	0158							
		08				2651	0017272	0.00	1440						
			TO 010			2709	G 3/19736	0189							
		OB				2709			1442						
		S	TD 012	5 -0118	3387	2726	0008106	0212	1444	3					
		08	S 012	5 -0115	3367	2726			1444	3					
		S	TO 015	-0110	3402	2730	0006971	0231	1445	3					
		08	S 015	-0110	3402	2738			1445	3					
		S	TO 0200	-0065	3440	2707	000+239	0259	14488	8					
		Ов				2767			14438						
		_	TD 0250			2751	0002999	0277							
		08				2781			14519						
		_	CEC 01			2786	0002433	0290							
		08				27d6			1453						
		06				2791			14544						
		08	S 0364	3010	34714	2789			14554	4	037		0	63 023	

DIRECTOR CONTRACTOR CO			NGITUDE 1 10		esotm name	STATION IG	an T j	y	PAS	CBUISE HUMBER		TOP 5 STATION NUMBER	-	DEPTH 10 80TOn	LIMPLE LI			WAVE SERVA!		10	9 BHTA	CLOUD			NODC STATION NUMBER
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	1			1)	°DT	*S".	WI	ND ON			it mpt #	ATURE "		NUMBE E		CIAI		'		,	,			1	
	am att fod Staphol (6 20 St Stigmals word	THE NUMBER OF	0012710-51016	##18 (975) W.E	WATER	+	DHB	SPEED	MAROM (adm)		BULB	WIT BUL	# E ODI	ORS	OBSER		NS.								
					COLON	+	10	11901	-		-	225	+-	-	-										
65.	T			7	ET	SO	19	504	08	5 00	10	005	7	14		_		_						· · · ·	
DL.	ST Family PATEON	CAPD	DEPTH (r		f "C	3		SIGMA	.	SPECIFIC	VOLUM		3 & D	5	MPUTED OUND	0,			MI FIG	м,					OCITY III san
	HOW THE CASE	TYPE	54,111	"				21/2000		AN OMAL T			E 10 3		MC	,	-	PO,	-1	to use		MO ₃ N eg of E	NO ₃ N	5-O ₁ -5	g.24
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		18.5	001		0169	319		256							372										
		STO	002		173	319		257		3022	459	9 0	047		373										
0	01 0	r S	0.05		0173	31 -		257							373										
		STO	003		175	321		259		0021	J 04	4 0	068		377										
		BS	003		175	321		259							377										
		STO	005		173	325		262		0013	3050	0 0	107		386										
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		STO	007		0159	329		205		0014	18:	5 (149		403										
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		BS	020		0018	343		270							486										
		STD	025		00 45	3+5		277		00.03	23	2 0	272		512										
	(IH S	025		0035	345	5	277	B					14	512										
		STU	030) -	9009	340	6	278	6	0002	537	7 0	256	14	534										
	L	FIS	U30	0 -(0008	346	6	278	ь					14	534										
	0	lB S	933	- (0005	346	3	278	7					14	550										
	(8.6	03 +	A (1005	345	97	275	7					14	557			0.4	7				075	030	

	CPURSE HUMBER	SHIP	LATI	1110	LONGITUDI	a X			STATION [GM]	HE F 10		a	CRUISI HEAMORE	1	SENTION MALANDE		DEPTH FO BOTTON	14001	r I.		PANE SHEATANES SHEATANES SHEATANES		CODE	CLOUD TYPE AM			NODC STATION NUMBER
3 1	8184	WE	810	10N	066000	W	907	10	08 20	075	19	70	WGS	01	4		0365	2	-1	00	0 X		X2	0 9			0014
	00T FRE 55		77 100 EL	dram discipa	MINIST OFFICE Y	DAI 881	4 (97), (64	*DT	*S".	WIND		M Own	40	-	A FLIRE	,c AL	HUMME	Lev	CIAL	-				. ,	•	'	
				****			- 10/10	MATER	TRANS D	• C	HE	11	Dev	BAB	1 m	AB E OE	Cas	Cester		INS							
								DT	SO 2		2	089	-01	1	-01	3 6	14										
		CAST	5 mad	-					30 12	- 31	-	-	-								e) for hama.	ALT.				Toutes	UNID SOU
		DUBAI	-	CAR IST TYP	DE PTH	(m)		1°C	5	2	GAAA —1		SPECIFIC NEOHALE		7.1	SAD OTH A		COUND	0,	~1.1	fum cm*		-			. VIIO	CITY RIVE
		m/440	1 10 N		•								MA CHAT			1 10		MC			PO, —P eq of 1	IOVAI object		MO ₂ — N	NO ₁ N	5-D ₅ -5-	g-14
				S	TO 00	00	-0	168	3159	2	543		0025	557	0 1	0000	14	367									
		075	· ·	08				163	3159		543	,					14	367			078	,	1		029	032	1
				_		10		108	3160		544		0025	48	8 (0025		369									
				08				168	3160		544							369									
		0.01		_		20		175	3161	_	545		0025	38	6 (0051		367									
		001		QR:		20		175	3161		545			_				367									
				S1				177	3100		549		0024	981	b (0076		369									
				Si				177 179	3166		549 576		0000	1/1	2			369									
				085				179	3199		576		0022	42	0 (0123		376									
				S1				165	3277		639		0016	. 4. 3 1	0 /	0172		376									
				OB:				165	3277		639		0010	, 4 3	,	2112		397									
				SI				149	3350		697		0010	145.	2 (0236		419									
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	192	2	08	S 90.	25	0013	3.3	01	1 2	652						144	476		0	20				012	020	
			5	10 00	30	0003	33	08	2	658	0	014	690	0.0	78	144	+72									
			S	10 00		-0039	33	25	2	673	0	013	187	01	06	144	459									
	192	2	083		50	-0031		241	3 2	673						144	459		0	130				026	042	
			_	10 00		-0092		33	_	682	0	012	362	01	38											
	10	2	08			-0032	3.3	329	2	682						144	440		0	149				044	034	
				10 01		-0060		39	-	687	0	011	689	01	68											
	192	2	OB:			-0090		390	_	687						144	445		0	51				046	034	
			_	TD 01		-0101		42	_	639		011		01		_										
			_	TO 01		-0112		44	-	692	-0	011	359	02	26	144	4 6, 4									
	197	_	08			-0112		44	_	692						144				154				051	019	
	19		08			-0127	33	484	2	645						144	443		Q	154				057	036	
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100 0	1 0 W	SHIP	LATITUD	,	LONGITUDE	- B MA ESDE						IGHMATC		T	pretn	aut		WAVE	wie	THER	. (M218			NODC
1000	I counts	1000		1.10	1.10	B S SQUAFF	" MCHITH, DA		41.4	4.0	CRUISE NUMBER		ATION .		TD: MOPPOM	111		SERVATIONS INGUINE THE	1 00	100	TYPE AMI			STATION NUMBER
	+ +			-		1	a 08 12	9		70	MGS	020		1	0933	2	00	O X	+	2	0 9			0020
51	3134	WE	77235	DM	068335W	1		WIND	1 17			OZ U	num *c					10171		-			1	1
•					BHALL BOWERS SHEAT	dent fault on 1 -	OT "S"] se	110	A POM	1111	T word		VIS	PHIMBER DBS	SPECIA OBSERVAT								
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							T 50	01 51	0	199	9 03	8	028	7	14									
		DURA!	tON	CAR	0						SPECIFIC	AQ! Nwi		dat	SOU	NO .		TANBERS LI	SHE					XITY =/sex
		m1916	1 10° NO	DIP	DIPTH (A	n) 1 'C	5 .		GMA	4	AN OMALT	1 10		10°	ALTO		, (PO _a = P	10JAL Mg dt I		IO3 - N IND OF E	NO ₃ = N eg et l	3 0, 3.	pH
		7-	1 10	S1	000	0 016	2 301	3 2	412		0038	011	0	000	144	99								
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more current	SHIP COOL	ATITUD	1 10	LONGITU	DE I to	25.5%	5QU	ABT	STATIC	GMT)		TEAR	EPU NUM	154	INATOR SIAT NUM	ION	DIPTH 10 BORTOM	SARPLE SARPLE		0#56	WAVE EBVATE		WEATHE	CLC	OUD			NODC STATION NUMBER
* mil **** m	WE 7	729 E 0140-96 IRVID 199	N SEECTRON	26833 HALF OFFER MEAN			259 ersi <i>e</i> u	*DT	S'D	F	JB5 WIND SPI OH	1	Nation i	is fran	Z 1	BUID EOD	O730	SPE OF SERV	CIAL		0 X		X2	4	8		1	0021
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			S) U 3			055	33			505		1136		0072		447										
			5 1		0)5			0 = 2	2.3			586	J	1119	159	3097		436			0.5	. 2				060	023	
	-185		On:		105			2:0		333		586	0.3	1113	16	0127		433			99	-				000	023	
	0.5		51		137			101	33	45 45		692	00	1113	3 2 3	0121		433			06	4				086	045	
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	385		0 s :		110			110		525		643			0 2	0.00		438			05	4				079	026	
	100				112			105	33			701	0.0	104	91	0181	_	444										
			5		115			103	33			705		101		0207		451										
	180		OB.		15			103		606		705					14	451			06	5				084	048	
			S		120			0:7	3.3			710	0(0026	543	0256	14	482										
	165		UP.		اد ع			057	33	6 40	, 2	710					14	482			06	7				098	033	
			5	To s	25	0	-0	004	3.3	15	2	720	31	1257	101	0.302		517										
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			- 5	10) 5))	C	300	34			733	0.	0072	244	0342		300								103	010	
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)4 ()			0 10 1	34			7-49	0(0050	J 32	0406		5 30			0.7					112	045	
)45		UP.)4 ()			39.		279		744		. 27 2				5 70			07	4				112	045	
)5 U			010	34			7,3)) 5 7		3437		607										
					15 U			0-6	34			750	0 () 154	9 ")	0523		624			0.8	0				133	046	
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		-										
900 R1 R H	SHIP LATITE	ID4	LONGITUDE	_ 8 MARSOEN	STATION		ORIGINATOR		DEPTH BAI	WAVE	WEATHER THISTE	MODC
TOWNTRY CRUISE	CODE .	1 10	1 10	MAISDEN SQUAM 10' 1'	[GMF]	TEAT		TION:	TO MOTION	OBSERVATIONS	1 (00) ((1000	STATION NUMBER
TABLE HUMBER			7		MONTH DAT						4	
318184	WE 7732	i N	05530 H	259 78		121 1970	1 1		0512 2	00 0 X	X2 0 9	0022
* 100 501 0	Les Transport (of Blue	· 95. (4.0C7910911	ALLY DESIRED SERVICE	HIL STURE TOT	'S' ,	SPED BARO	AIR TEMPTEATI	olite "C	NUMBER SPE	CIA)		
	S BARRER ET ESTEPSES			#9TAW BOJO3	TRANS DIR	OR Ind		F BUID KOOP	CAZ OSTEN	ATIONS		
				DI	50 24	502 23	0 044 0	29 7	15			
	CASI				30 24	302 2	0 044 0	7	COMPUTED	AMBILINT LIGHT	T	COMUS GIRLS AND
	DURATION CAS	CARD TYPE	D(FIH (m)	1 1 1	5	SIGMA - I	SPECIFIC VOLUME	0 (D; 04M m 5 VD	SOUND VELOCITY = SEC	O mill tom tom?	Office P NO2 N N	MELOCITY IN CO.
		STI	0000	0172	2649	2121	0065869	0000	14454		-	
	121	085	0000		26487	2121	,	1	14454	005		000 025
		STI	0010	0052	2665	2139	0064148	0065	14403			
		065	0010	0057								
		STI	0020	-00+4	2631	2154	0062651	0128	14362			
	001	ÜBS	0.020									
		511			2696	2157	0061394	0.110	14304			
		uB\$	0033									
		51			2728	2134	J053802	0310	143 -1			
		CES										
		STI			2768	2226	0055661	0453	14342			
		085				2253	2.52577	0.5.10	1 357			
		STI	0100 0100		2308	2259	3032566	0589	14356			
		280 T2			2343	2291	3049463	0716	17.360			
		085	0125		2343	2271	3047405	0110	14368			
		ST			2368	2323	0046374	0836	14378			
		085	0150		2 ,00	2323	00.0574	0000	1,3,0			
		STI			4907	2380	0040283	1053	14413			
		OBS	0200									
		STI	0250	-0007	3047	2448	0034425	1239	14468			
		085	0250	-0007								
		ST	0300	0052	3127	2510	0028610	1397	14514			
		088	0300	0052								
		STI	D 0400	0085	3286	2636	0016723	1624	14568			
		0 p \$	9400									
		085	0+70									
		085	0493	0091	34342	2754			14607	077		112 034

900 BL 0 BL			ONGITUDE 5	MARSDEN	STATION TIME		ORIGINATOR	s T	DEPTH BAI	T WAVE T	T'INSTR NOOC
IOMETER COURS	M CODE .	I ID .	2.3	SQUARE	(GMT)	TEAR	CRUISE STAT		to sum	OBSERVATIONS WEAT	OF CLOUD STATION
-					AONTH DAY HE !	7					TEPE AMT NUMBER
31918	34 WE 77.	382N 06	5838 W	259 78	08 23 15		MGS 023	, , 1.	3293 2	00 0 X X	2 6 8 0023
0 april 81	rece group framework role is	HARING PERTRONICALES	DENEMBER SHEET SALE OF	TQ*	*S" WINE	PEED BAPOM	AIR TEMPERATUR	PF "C VIS		PFCIAL	
-	PARKET BARRED OF ASSESSED	N ME INT PART	r	COLOR	TRANS DIR	OFCE (mbs)	DET BULB WES	BULE CODE	OBS OBSE	EVATIONS	
				-	1	01 24	5 042 0	23 7	10		
	CAST TWEE			1		1			COMPUTED	AMBIENT LIGHT.	"MEXSURED SOUND
	DUBATION -	CARD CARD	Dr Pttr (m)	t °C	5	SIGMA:: 1	ANOMALY 8 10	DIN M		0, =1 1 fum cm 1	THON THOS N TS.O ST.
		NO						1 10,	m SEC	PO _B P TOTAL = E ing at 1 ing at 1	NO ₃ -N NO ₃ N S.O ₃ - S ₁ yH wg at t ug at t
		STO	0000	0207		2158	0062366	0000	14476		
	150	088	0000	0207		2158			1+476		000 032
	1.60	OTZ	0010	0025		2505	0029167	0045			
	150	085 ST0	0015	-0040		2625	001/300	0.0	14444		023 037
		STO	0030	-0059 -0090		2640 2656	0016309	0065			
	150	ORS	0040	-0110		2683	0013432	0083	14430 14425		075 035
		STD	0050	-0114		2657	0011830	0109			075 035
	150	088	3065	-0115		2693	0011030	010)	14429		095 027
		SID	0375	-0111		2694	0011193	0138		000	0,7, 02,
	150	UBS	0090	-0107	33501	2090			14437		
		STO	0100	-0106	3351	2697	0010901	0165	14440		
		STD	0125	-0104	3354	2700	0010636	0192	14445		
	150	085	0141	-0103		2702			14449	074	117 032
		STD	0150	-0099		2703	0010337	0218			
	150	280	T0192	-0071		2709			14473		113 030
	1.6.0	012	02 00	-0053		2709	0009744	0269			
	150	2.8U 01.2	0243	-0011		2718	0000443	0.31.5	14512	076	114 045
	150	08.5	10273	-0013		2721	0008643	0315	14512	0//	003 034
	150	08.5	0275	-0036	33704	2132			14507	064	097 036
	100	0.03	0213	-0039							

I DWR/ST C PUISS	SHIP	LATITUDE		LONG	THEFT	- 2	AAA BS	-DEM	STATE	ON	TLME		-	041	GENATOR	3		DEPTH	BAI			MAYE			INSTE	1		MODC
COME POLICE DE	CODE		10		1 10	M117	5QU			GME		TEAR		CPUISE HUMBER		FICHN R BB A	٦.	TO BOTTOM	Wens /			PVATE		CODE	CLON		- 1	STATION
			+			-	10"		-		Har VIO	7 /					-		-	+-	-	GT PER	251 68	+	TYPE A	-		NUMBER
313184	WE	77415	N	0694	0 h		259			23		1970	7 1		024	-	10	201	2	0	9	X C	1	X7	6 8	1	l	0024
* mo11 #444	SHE THE	71 100 21 60 MG	ES2079-001	CALLE DESI	1999 14893	E BATA (975) 163	*DT	*S"	,	SPEED	BARO	and II		MPTBATU		r15 P	NUMBER	SPECI	ΑĻ	- 1							
	MI BANGS P	4519.615E5 #HB	0 IN1 4	PRIM.				COLOR	FB,ANC	Disk	OB PORCE	(=	bel	Der s	ULB WT	F BULB CC	300	OBS IFVILS	O#218AY	TIONS	.							
										34	-	-	5.7	04	5 0	27 6		09										
	Cast	Tund							-	1-	1300	1	Т					COMP			-	NAME OF	T LIGHT				- MAS	URED SOUN
	DURAT	OH	CARD		DEPTH :	m;	,	10	1		SIGN	4 F	1 .	PECPIC V		DYN		SOU VELQ), =1	1 -	lum:	·-			I		OCIFY on ser
	m.//35/0	TO MO	TYPE									_		TOMAL!		1 1	0,					PO, -		OFAL P	NO ₃ N	MO ₂ — N	3.01-3	PH
			ST	0	000	0	-0	126	25	76	20	71	1	0070	672	000	0	143	06									
	174		085		000	U	-0	126	25	759	20	71						143	06			000	o `			000	028	
			ST	0	001	0	-0	060	32	46	26	10	(0019	175	004	4	1.44	32									
	174	•	OHS		221	0	-0	060	32	45 8	26	10						144	32			03	1			022	048	
			ST	U	002	0	-0	089	32	96 -	26	52	(0015	212	006	2	144	27									
	174	•	GBS		002	5	-0	099	3.3	143								144				0.5	9			972	044	
			ST		003			102		19	26			1013		007		144										
			ST		005			110		35	26		- (3012	1 4 3	010) 2	144	_									
	174	•	OBS		005			110		3 + 6		_						144				05	6			083	031	
			ST		007			111		64	26			0011	445	013	31	144										
	174	•	DRZ		007			111		440		-						144				10	3			056	039	
			ST		010		- 0			48	26	_	(0011	014	015	19	144	-									
	17-	•	OBS		010			107		485								144	-			09.	2			091	036	
			ST		012			105		53	26			010		018		144										
			ST		015			102		56	27		-	0010	537	021	3	144				0.5	,			074	0/0	
	174		085		015			102		562								144				054				074	048	
	174		OBS		01.7			0 19	33	593	2.7	03						144	21			06	1			103	050	

1001 01 1000/07 1000	CRUISE NUMBER	SHIP	LATITUO		LONGITUDE		PSDEN UAPE	STATION (G	aAT;		YEAR	CRU		STATE STATE NUM	ON	DIFTH TO BOTTO	1	111	Dia	BSERV	AVE ANION	13	MEATHER COOP	CLO	UO			NODC STATION NUMBER
31	8184	WE	77331	LN	066465 h	259	76	08 2	3 2	27 1	970	WG	5 02	25		044	В	2	00	0	X		X2	7	6			0025
							*DT	*S".	W	(IND			IT TEMPT	# A TUR	°C	NUMB		SPECIA							'			
	MIN 2012 0	UTAL TOP	97 017 FF 187 0 FF		MARYA MARTA BAZTANA PERIN	8418 (975) 164	watte	TRANS	DIE	SPEED OB	[mb	10 E	MT SUIS	wet	BULE COD	005	. 0	PREFAT										
							10100	Im1	36	506	26	C	039	10	28 7	11	-	-		-								
		(CAN)	Total	T					30	300	120	-	034	T	. 0	1	Om PUT	10.			BH NT	I CALL		-			Tank a St	min sound
		Butt	n F 10,20%	(AR	DEFIN N	7)	1 '¢	5		SIGMA	-1		PIC VOL		PAD DFN a a 10 ¹		SOUNE LOCIT	0,		FC	tum ra D _a = P	Tioi	AL = +	NO _y —I		N = N		PH PH
		-		ST	0 000	0 (1190	321	0	256	7	0.0	2325	i b	0000	1	454	1		1		-					-	
		122	7	083			116	320		256				- 1		_	454	- 1		1	002	-	1		0.0	02 '	0'28	1
				S 1			0085	321		257		00	2245	15	0022	1	449	3										
		22	7	085	001	0		321	0 7											(000				0.0	03	041	
				S 1	D 002	0 (0003	327	1	262	8	0.0	1752	25	0042		446											
		2.2	7	083	002	5 -(0026	729	30	264	7					1	445	6			011				0.	16	031	
				S 1	D 003	0 -(1034	330	2	265	5	0.0	1454	• 0	005	1	445	5										
				5.1	0 005) -(1061	333	0	207	3	00	1267	78	0006	1	444	9										
		22	7	08.5	005	0 -(10-1	333	04	267	9					1	444	9		- (31				0:	53	031	
				S 1)UE7	334	4	269	1	0.0	1149	96	0116	1	444	3										
		2.2	7	085	0.07	5 -(017	434	44	269	1					1	444	3		(30					59	033	
		2.2	7	U8 5	009	9 -(oB00	334	45	269	15					T.	444	9		()47				0 9	90	048	
				S 1	0 010) -:	9000	335	0	26:	15	0.0	1100	37	0145	1	444	9										
				SI	0 012	5 -(1080	335	4	209	19	0.0	1079	53	0172	1	445	6										
		22	7	083			072	335		270						_	446	5		(043				06	58	037	
				S 1			1072	335		27:	_	10	1041	. 2	0198	_	446											
		2.2	7	065			045	335	91	270							443			(335				0.0	06	037	
				S 1	0 020) -()]++	3 16	3	273	19	0.0	3972	2.3	0249	1	448	B										
		2.2	7	083			0110	338	2 3	271							451			ĺ,)65				10)5	036	
				S 1	D 025	0 -(0002	338	4	271		0.0	0882	2 d	0295	_	451											
		2.2	7	UB5			1066	3 4 1		273							450			(339				0	75	037	
				S 1			106H	341		273)))	0712	2.6	0335		456											
		2.2	7	OH:	1039	7 (640(343	01	675	1					1	458	9		()46				0.6	35	016	

TET CPUISE .	SHIP	LATITUDE	U	ONGITUDE	Mary 108	500	AP1	[GMI		r) a P	CPUISE NUMBER		# S TION	DH fi	0	111		WAVI DESERVAT	IONS	WEATHE	CLOUD			NODC STATION NUMBER
313184	WE 7	77362N	0	663421		259		08 24		970	-	025		05		2	0.0	- + +	8 44 68	X2	7 8	1	-	0026
313134	"- ·	1130211	10	003721	1	100			1	770			. 7. 1	T	-		Tor	1017	1	^2	1,10		1,	0026
0 mm Pers 15	-95 THEFT 691	100 8164-06 (6111)	100 H 44.1	CT DESIRVES SER	EI 9410 /	175/ 454	'DT	*S'0 -	SPIFO	BAROM		mPt # A T		15 NUM		SPECI	Ai							
		LYLEBINEZ BANGE 100					WATER COLOR	TEAMS DO	FORCE	Imbs	J DET E	IULE WI	ET BULF C	DDE IEN		BSPEVA	nons							
							COLO	0		26	9 03	9 (028 7	1	3		-							
	CAST	Lang				1		1	-	1			1 24		COM PUS			AMBIE	NT LIGHT				I'MEASU	910 SOUND
	DUBATION	H CA	CO	D(FTH	[m]		1 °C	3	SIGMA	- 1	SPECIFIC AN OMAL?		, DYN	₩	VELOCI), ml		W / 1	+ 7		T.,,		CHY m see
	m (Upwe T	IND CAST TY	PE								APP CHIERTY		1		m Sé	c		PO,	r /1	Office P up of / I	MO ₃ = N Mg et/5	HO ₃ H up of E	5:0 ₃ -5:	ρН
			TD	000			188	3186	254		0024	981	000		1453									
	004	'0B		000			188	3186					*		1453				,					
			TO	001		0	149	3199	256	2	0023	747	002	4	1452	0								
	004	OB		001				3199																
			TO	002			105	3247	260		0013	831	004		1450									
	004	90		002			082	3266							1450									
		_	TO	003		_	047	3281	263		0016		000		1448									
		_	TD	005		_	052	3322	207	-	0013	357	009		1445									
	004	08		005			052	33220							1445									
			TO	007			087	3341	268		0011	749	012		1444									
	004	OB		007		-0		3341							1444									
			TD	010			083	3346	200		0011	357	015		1445									
	304	08		010			085	3346							1445									
			TD	012			076	3354	269		0010		018		1445									
			TO	015			069	3360	270		0010	323	020		1446									
	004	0.6		015			063	3360							1446									
			10	020		-0		3368	27)		0009	788	0.25		1448									
	004	0 b		1020		-0		33480							1448									
			TO	025			005	3387	272		0008	044	030		1452									
	004	08		025			014	33399							1452									
			TO	03.0			071	3415	274		0006	913	034		1456									
	004	08		030			D74	3415							1456									
		_	TO	040	_		88C	3430	275		0005	834	040		1458									
	304	08		T040		0.0	880	34310		_					1459									
	004	08	_	046			380	34346	5 275	5					1460	1								
	004	08	S	047	1	0	780																	

HOW BIT IS NO	SHIP LATITU	IDE LO	DHGITUDE 35	MAPSOEN SQUAPE	STATION TIM (GMT)	BATY B	OFIGINATOF		DEPTH BAS MAPL	085	WAVE SERVATIONS	WEATH		T		HODC TATION
Imm NUMBE		1 10	1 10 2	10. 1. 1	ONTH DAY HE	10	NUMBER NUM		BOTTOM BET	Diff	HGT MO THE	100	TYPE AN		N	UMBER
31818	4 WE 7742	N 00	6625 W	259 76	08 24 04	7 1970	WGS 027		0274 2	00	O X	X2	6 8		0	027
1	' '	1	1	'DT	*S" WIF		AIR TEMPERATUR		NUMBER SMCI			,		'		,
T 60/1 P4	er alvos Tomana (od drom Mars Booker er estemas	er filliannen eri Den er innen eri	T DOMENTAL SERVE (METAL) M	WATER	TRANS DIE	SPEED BAROS		BUI & CODE	045							
				corce	(m)	HORCE		21 7	(LASE2							
	en all all				03	504 26	7 038 0	21 7	09							
	DURATEUM	CAPD					SPECIFIC VOLUME	DA E	COMPUTED SOUND		Sum cm	erf.				ID SOUND
	MISSELES DAY CAS		DEPTH (m)	1 'C	5	SIGMA T	ANDMALY 1 107	R 10 ³	w 24C	2 =1 1	PO _y P ug et 1	TOTAL P up at /T	MO2 N	HO ₃ -H	Si Oy Si	μН
		STD	0000	0000	3068	2465	0033013	0000	14433			1				
	047	OBS	0000	0000	30681	2465	1		14433		1	1			, ,	1
		STO	0010	0127	3149	2523	0027446	0030	14504							
	047	082	0010	0127	31489	2523			14504							
		STO	0020	0047	3240	2601	0020063	0054	14482							
	047	065	0025	0015	32733	2629			14472							
		STD	0030	-0004	3284	2639	0016463	0072	14466							
		STO	0050	-0060	3317	2668	0013681	0102	14448							
	047	OBS	0050	-0060	33173	2668			14448							
		STO	0075	-0084	3336	2684	0012120	0134	14444							
	047	082	0075	-0084	33364	2684			14444							
		STD	0100	-0082	3348	2693	0011251	0163								
	047	OBS	0100	-0082	33477	2693			14450							
		210	0125	-0073	3350	2695	0011080	0191	14459							
		\$10	0150	-0065	3354	2698	0010812	0219	14468							
	047	ÜHS	10152	-0064	33544	2698			14468							
		STU	0200	-0048	3366	2707	0001954	0271	14485							
	347	OB \$	10204	-0046	33669	2707			14467							
		STO	0250	-0015	3378	2715	0009206	0318								
	047	OBS	0253	-0012	33785	2715			14512							

DON RF U MS DON'ST CEUTSE DON PELMANES	SHIP	LATITUDE		HGITUDE 1 10		ISDIN UARI	STATION IG	os l'j	- 11	AB	OPI CRUINE DEMONS	GINAFO4 Stat MU	HOM	DIFTH TO BOTTON	Hart	< l		WAVE EFVAT	IONS	WEATHE	CLOUD			NODC STATION NUMBER
319184	WE	7725 N	00	540 h	259	+ +	08 2	4 0	75 19	970	WGS	928		0201	1 2		00	0 X		×1	3 6			0028
* 107 2552	gries item	10 104 Pt-4+95 (UP) D 6510 Pt-65 WWW T		persona rigini i	9476 (BTS) 184	*DT	S'o	Dis		BAPOM (mbs	4114	MPI BATU	E BOTE COU	Oss	200	M.CIAL EVATION	NS.	Ċ				'	•	
								07	506	200	6 03.	2 0	18 7	09										
	0.44 0.44	HITE CASE	A PD	DEFIN (m)		т 'с	3		SIGMA	. 1	SPECPIC V		3 40 07N 1		SOUND ELOCITY SEC	0, =	ni, i			tOtal +	NO ₃ N	NO ₃ - N		OCITY ** on
	M	Te [®] NO	STO	0200	0	177	317	0	2537	7	0026	169	0000) 14	4527	1				:				
	07		35	0000		177	316		2531				,		4527	1			,	, ,			'	1
			STO	0010) (147	320	4	2567	7	0023	339	0024		4520									
	0.7		3.5	0010		147	320		2507					_	4520									
			STD	0020		1029	325		2614		0013	785	0.34		4475									
	37		2.5	0025		014	427		2002						4459									
			STO	0030		1020	326		2630		0016		0 36		4458									
			510	0050		1043	330		2660		0014	401	0094		4455 4455									
	07		3 S S T D	0050		1043	330		2600		0012	7 1	0128		4451									
	27		45	0075		1065	332		2677		0012	100	0120	-	4451									
	3.6		STO	0100		1069	:34		2659		0011	632	015		4445									
	07		3 S	0100		1009	334	_	268		0011	002	013		4445									
	0 /		STO	0125		1390	334		2675		0011	0.7-	018	-	4451									
			STO	0150		0 42	335		2701		0010		0214		4455									
	3.7		45	T0151		3=2	335		2701						4455									
	27		3.5	10179		1978	336		2736						4400									
	97	5 0	3.5	0181		07e																		

BTET CRUISE BTET CRUISE BE FILMBER	SHIP	LATITUO	1 10	LONGITUDE		SDEN UART	STATION (GMT		TEAR	CRUISE		E S VION MAIR	OFFTH TO TOM	441 148/1	Diff	DBSEPY	ATION:	,	COOR	CLOUG			NODC STATION NUMBER
318184	WE	7723	N	00032 4	25.	++	08 24	093	1970	MGS	029		0338	2	0	+			X1	3 6	-		0029
* 1077 FRE 01 Mrs		sit the station it astronace en		HEALET DUSLUMEN WEIGH APPEAR	i mata (BTS) usa	*DT		WIND SPEE OB FORC	(104)	ME 76 W	MPIRAT	UBS °C VIS	NUMBER OBS (EVZLS	SPECI				,			•		
							0	7 506	26	6 03	2 1	18 7	11										
	OURAT DURAT MESSER	IOH	CAR	OFFIN (r	n)	t 1C	\$	SIGA	1 1	SPECRIC AN OMALT		E 10 ²	VEG	IND	9 -1	I R	dod NT () fum rm ² O ₂ = P mg out 1	FOJ A		NO ₃ N	HO ₃ —N	1 46	
	M.	18	SI	000	0 0	137	3182	25	49	0025	008	0000	+	-		-	-	-			-		_
	09	3	OBS			137	3191		49	, , , , ,		, , , , ,	145			١ (000				000	000	
			SI	D 001	0 (123	3224	25	84	0021	671	0023											
	39	3	005		0 (123	3224	4 25	84				145	512		(700				005	000	
			SI		0 (119	3241		98	0020	393	0044	145	314									
	0.9	3	OPS			105	3250		00				145	511		- (005				011	024	
			SI			1)44	3254		19	0010		0063	144	97									
			ST			036	33C5		57	0014	706	0036	_										
	19	3	UPS		-	036	3305		57				144			(25				078	011	
			SI			051	3322		7.2	9913	337	0131	144										
	09	3	UES			051	3322		72				1 4 4			(0.80				102	013	
			ST			095	3336		84	0012	1 J 5	0163	_	-									
	09	3	OBS			0-0	33354		85				144			(032				118	026	
			ST			094	3347		34	0011		0192	1 4 4										
			ST			091	3357		01	2010	4/5	0219	144										
	09	3	CBS			091	3 3 5 7 1		02	0000	,	0.7.0	144			()41				165	022	
	0 ,					050	3372		12	0004	4 34	0269	144								103	0.24	
	0,)	082			04 4	3372		12	00 111	0.10	0.14	144			()56				193	024	
)^	3	085			019	3360			0004	003	0216	145				38				153	020	
	,		SI			006	3384		19	0004	770	0360				,	/)0				100	020	
	09	3	085			005	3384		20	0001	110	0300	145			- ()42				173	034	
	09		085			005	J 3 C 4.	21	20				145	20			772				113	054	

_	_			-		-	nager .		_											_			
9491 E	in in the	SHIP	LATITU	De .	LONGITUDE	- 8 MARSO		ATION T				GINATO	1	DEPTH	ani.		WAVE	WEATHER	INSTR		T	NODC	
(pad 191 (pp	CPUISE NUMBER	CODE	4	1 10	1 10	2 3 3QUA		(GAT)		4.0	NUMBER 1		MON B MAN	ED MOTION	100		BVATIONS GUMB THE RE	CODE	CLOUD			STATION	
	18184	WE	7718	QA.	066260m	-			-	270	1		-		-	1	+ +	+	EVPE ANT		-	NUMBER	
3,	do roal	M.C.	1110	014	0002004	1 1	76 00			970		030		0329	2	00	D X	XI	6 2			0030	
•	mail WHI C	was man	ATT THE PERSON	16 162119 mm		887A (975) UM	DT S	50	SPIED	BAROM		MPIBAT	UNI C VIS	TOUMBS B	SPECIA								
	4 400		H 873181787 B	190 E 190 F A	PT AI			ANS DIE	Off FORCE	[mb+	Det a	ULB =	IT BUIL LOD	OBS IEVELS	OBSERVAT	ONS							
						-	-	02	\$20	26	4 03	2 1	023 7	111		-							
		CASI	Total	-	-		-	102	320	20	1 03	-11	1 520	COMP		- +	AMBIENT LIGHT					fa 0 ata	
		DUBAT	HON	CARD	DEPTH IN	1 7	·e	s	SIGMA -	,	SPECHIC I		3 AD	500	IND _	-1 2						CITY myse	
		M1314964		TYPE							ANOMALT	a 10	1 103					ATAL P	NO ₂ N	NO ₃ N arg or I	5.0, 5.	рн	
				ST	0 000	0 01	14 7	211	2574		0022	651	0000	145	0.5						off on 1		
		111	1 '	085				2108	2574		0022	0,1	1 0000	145		- 1	001			005	013		
				ST				3221	2582		0021	852	0022				001			005	013		
		111	1	OBS				32206	2582				0000	145			000			004	020		
				5 T	0 302	0.0	76 3	238	2596	3	J023	39u	0043				000			004	020		
		111	1	065	002	5 00	61 3	32468	2605					144			000			011	011		
				ST	0 003	00	43 3	259	2616		0018	620	0062								011		
				ST	005	-00	17 3	297	2650)	0015	370	0396	_									
		111	1	OBS	005	-00	17 3	2974	2650)				144	65		014			048	012		
				5 T	0 0079	-00	63 3	326	2675)	0013	001	0132	144	52		-						
		111	l	062	007:	-00	63 3	3259	2675	,				144	52		021			098	014		
				ST	0 0100	-01	21 3	346	2693		0011	248	0162	144	32								
		111	L	082	0100	-01	21 3	3460	2693	i				144	32		029			137	014		
				ST		-01	U3 2	354	2699)	0010	699	0190	144	46								
				51			82 3	361	2704		0010	182	0216	144	61								
		111	Į.	0H2	0150			3614	2704					144	61		038			175	017		
				ST				376	2714		0009	252	0264	144	94								
		111	Į.	ORS	10201			3764	2715					144	95		019			108	020		
				51				350	2717		000091	009	0310	145	12								
		111		ORS	0251			3805	2717					145			033			162	017		
				\$T				385	2710		30081	865	0 35 5	145	22								
		111		08\$	10310			3823	2718					145	24		037			154	017		
		111		082	0312	-00	09																

SHIP LATIT	1 10 10	ONGITUDE 3	MARSON SQUARE	STATION THE	VEA9		EION MBJ P	DEPTH SAI MARK! SOTTOM SE	OBSERVATIONS OR HGT PER LUI HE	WEATHER CLOUD	HODC STATION NUMBER
34 WE 771	6 N 06	608 W	259 76	08 24 1	39 1970	WG5 031		0229 2	00 0 X	X1 0 1	0031
nes usum Transpit fol til Himas manne er estieties		F DOSLOVED SCHOOL DATA B	"DT WATER COLOR	FRANS DIR	SPEED BARON OB IND	s) Der sots wi	1 BULB K OD	TEVELS			
6				03	503 25	1 024 0	15 7	09			
CASI THAT DURATERS	CARD					SPECIFIC VOLUME	9 40	COMPUTED	AMBIENT LIGHT		TIMEASURED SOUN
W. 1 10 N		DEPTH (m)	1,4	5	SIGMA —T	ANOMALT - 1 10	B 10 3	METOCILA (TALE P NO, -N NO, N	3 O ₅ 5- pH
	STO	0000	0120	3213	2575	0022560	0000			40, 100, 100	40
139	085	0000	0120	32125	2575		1	14508	003	005	012
	STO	0010	0113	3213	2576	0022450	0022				
139	OBS	0010	0113	32134	2576			14506	005	005	030
	STO	0020	0039	3222	2583	0021741	0044	14503			
139	085	0025	9800	32282	2589			14499	003	006	013
	5 T D	3031	0069	3241	2600	0020125	0065	14493			
	\$10	0050	-0006	3286	2640	0016311	0102	14469			
139	085	0050	-0005	32858	2640			14469	011	040	015
	\$10	0075	-0096	3331	2681	0012450	0137	14437			
139	065	0075	-0096	33314	2661			14437	029	122	019
	510	0100	-0110	3350	2696	0010963	0167	14438			
1 39	0P5	0103	-6110	32572	2040			14438	026	130	019
	5 T U	dS10	-00H5	3357	2703	0010354	0193	14455			
	510	0150	-0005	3365	2708	10009901	0219	14409			
139	085	T0151	-0364	33652	2705			14470	078	269	028
	510	0200	-0036	3373	2712	0009448	0267	14492			
139	UBS	T0200	-0336	33734	2712			14492	087	263	028
1 3 9	08.5	0202	-0052								

Table II.—Observed and interpolated oceanographic data from stations occupied by USCGC WESTWIND, 3-9 Sepember 1970, prepared from NODC Listing No. 31-1705.

									-		-		-	_			_	1	7	
000 B1 B 91	SHIP LATITUE	10	NGITUDE		PSDEN	STATION	n II arij	TEAR	CINISI	RIGINATOR		DE FTH TO	BAS /		WAY AVESS		WEATHER	CLOUD	-	HODC STATION
COM NUMBER	CODE .	1 10	1.10	2 0 10.		O HINGS			HUMBER	NUA		MOTICAL	/111	Die		TR No se	(004	TYPE AM	1	NUMBER
311705	AE 7826	2N 07	309 W	260	1 1	040	-	26 197	O KBS	001		0284	1	00	0	X	X1	4 3		0001
1 271.001	. 1 1020	0 1		100	- 1	*5°.		HD		I mere e a tu	et 'C	NUMBER	1		1 '	,			1	
* set 701.0	CONTRACT OF THE PARTY AND ADDRESS OF THE PARTY ADDRESS OF THE		DEPTHE PROFILE	MATE (STE) SEA	DT	TRANS	DH		OMETER Host Diff	eus we	F BULB KODI	085	SPICE OBSERVAT							
es all as	A STREET BY STREET OF	allo care more on			COLOR	le1		FORCE				HASTS			4					
							07	507 1	28 -0	12 -0	121 17	09								
	DARATICAN	CARD							SPECIFIC	VOI Used	9 40	COMP	meD _			ent to				"MEASURED SOUR
	MISSERSE CASE	TYPE	DIPTH IN		7 °C	3	^	SIGMA T	AN OMAL	1 3 107	07N m			2 -1 1	-0,		1 - 14 K	MO ₂ N	NO ₃ -N	
	HI 1 10 MO	6.50	0.2.00		212-	11.	,	2530	202	2777	0000	-+-				-1	-	PR 00 (eg of [
	126	085	0000		0136	14اد 14د		2530	1 002	3111	0000	143								1
	120	STU	0010		0131	315		2536	002	6259	0026									
	126	UES	0010		0131	315		2536				143	885							
		STU	0020		0137	315		2537	003	0123	0.052	143	384							
	126	OBS	0025		0137	315	47	2539				143	385							
		STO	0030) –	0134	315	5.5	253 €		5896	0078									
		STD	0051		0114	31>		2551	305	3798	0129									
	126	UUS	0050		0114	311		2501				144	-							
		STO	307:		0070	327		2635	001	0003	0179									
	126	083	2079		0070	121		2635	12.22		0.21	144								
		SIU	010		0092	331		2656	001	3866	021	7 1 - 4 4 14 4								
	126	08.5	010		0092	331		2666	121	1825	0249	-	-							
		ST0	012:		0108 0114	335		2712		0373	027		-							
	1.2.	088	1015		0114		76	27J3	301	0,,,	021	14.								
	126	STD	020		0098	33		2712	330	1403	U328		463							
	126	088	1020		0097	3.3		2713	,,,,				+04							
	120	\$10	025		00#2	33.		2720	303	1808	037	2 14	480							
	126	OBS	1026		0077		330	2722				1	+85							

100 B1 B 00	SHIP LATITUD			_ 8 us	ISDEN	STATIO	N TIM	E I		04	HGIMA	1045		DEPTH	e.u	T		VAVI		WEATHE	"INSTR	T	T	HODE
CHURCH CHURCE (0004	, 10	ONGITUDE 1 10	3 5	98 AL		MT)		TAR	CRUISI PRUMBER		STATION NUMBER		10 80110#	1100				TIONS	1000	TIPL AA			STATION
188 Minds				+	1	MONTH 0			070	-	+	_	+		1	+	-		+	+	+ +	-	-	0002
311705	WE 7928	N O	73275W	260	83	09 0	3 14	+3 1	970	_	00.			0476	1	1.0	0)	A	X1	4 3		- 1	0002
* april more dis	on them are too make a	DLEE FEMALES	IT DESIRES WELL	nata miss ma	PDT	"S".	WIF		BAROM		I noPl B	ATURE	"C VES	NUMBER	1910	A.I								
	GAMES ST STREET, ST		M		WATER		DHE	SPRED	[mbs		ene	wit h	ив коо	CEYELS	OBSERVA	TION								
					COLOR		10 5	SO 5	12	J 03	16	-01	1 7	12			_							
	Carl tool -				1	-	10 .	303	12	3 30	, ,	-01	1	1	PUTEO		-	a ne fini	ENT LIGHT				2 mil at	UREO SOUNC
	CAST Total DuRATION	CAPD			1 *C	1.		SIGMA		SPECPIC	VOLUM	md San	9 A D	50	UND	, =		f.e	m . m²					DC(fy = 101
	MINIOUS CHE CASE	TYPE	DEPTH (4	m)	1 -6	5		24Cmm	- 7	AN OMALI		10'	E 103	761	SEC S	, -		PO,	- P 10	OJAL-†	NO ₃ - N	NO ₃ P	5.03-3	- рн
	N, 1 (0 NO	STO	000	0 =6	141	314	0	253	5	0020	35	9	0000	1 1 4	378	_				1				
	1 44	085	000		141	314		253		0020	, , ,	, 1	0000		378		1		1					i
	2.4.4	510			138	315		253		0026	1.8	7	0026		382									
	144	OBS	001		1138	315		253							392									
		STO			128	315		254		0025	64	3	0052	1.4	304									
	144	085	202		124	316		254						14	392									
	_	510	003		122	316	7	254	9	0025	00	0	0077	14	395									
		STD	005	0 -0	115	318		250	3	0023	61	6	0126	14	404									
	144	ORS	005) -1	115	318	53	256	3					14	404									
		STO	007	5 -(104	328	5	264	3	0016	01	8 (0175	14	427									
	144	085	037	5 -(104	328	46	204	3					1.4	427									
		STO	010	0 -(1106	333	2	208	2	0012	235	3 .	3211	1.4	437									
	144	Obs	010	0 -(100	333	20	268	2						437									
		STO	012		106	335		269		J013			0240		443									
		510	71.5) -(1107	336	3	270		000	95	5	0266		449									
	1,44	082	015		107	336		270						-	449									
		STO			NH9	337		271		200	/10	3	0314	_	468									
	144	GAS	050		00-8	337		271							468									
		STO			0061	33		272		000:	09	3	0357		4 → 1									
	144	OPS	02.5		1000	338		272							491									
		STO			0051	339		273		0007	54	0	0396		505									
	144	085	1030		0051	330		273		0.00	0.				505									
		STL			0045	341		274		0000	.06	2	0464		527									
	144	UHS	040		0045	3 4 1		274							527									
	144	088	1045	13 -	3042	342	1.5	275	1					14	538									

	SHIP	LATITUDE		OHGITUDE	35 M. S.	LESDEN DUARE	STATION (GMT)	TEAR TEAR	-		DES EATION SUMME	DIPTH TO BOTTOM	841 14873 1877	Die	WAVE DISTRIBLE DISTRIBLE		1000 TOO	CLOUD TYPE A			NODC STATION NUMBER
11705	WE	7829 1	0	7345 W	26	0 83	09 03	169 197	0 K8S	003		0567	1	00	0 >		X1	4 3			0003
				(F 005409E 54044 A		DI	*S".	VIND	AJB POMÉTÉ B	TE MPERA	TUPE "C VES	POLIMAN B	SPECIA	M	7						
		STANDARY AND STANDS			PLE SELECT	WATER	TRANS DIE	04		BULE	WET BULE COD	DBS IEVEIS	OFSERVA	IONS	-						
						COLO	10	S05 1	20 0	05	011 7	12			-						
	CA11	Ind I					10	307	20 10	0.5		COMP	uzen.		AMBII	NT LIGHT				Cartas	UPED SOU
	DUBATE	ОН	CAPD	DEFTH [m]		1 °C	l	SIGMA 1		. AO(film)	. DYM m	100	IND .	, ()	- Iu	- (-2			,	' YELD	OCITY = H
	MI MACH	10 HO	TYPE						AN OMA	17 - 8 10	1 10'	-			PO,		MAL P Mg of /I	NO ₃ — N	NO ₃ —N ug or/I	5 · O ₅ · 5 ·	" pH
			STO	0000	-	0148	3132	2521	002	7684	0000	143	73								
	169	۱ 'د	185	0000	-	0148	31320	2521				143	73			,					,
			STO	0010	-	0151	3133	2522	002	7619	0027	143	73								
	169		185	0010	_	0151	31327	2522				143									
			STO	0020	-	0149	3137	2525	002	7283	0055	143	76								
	169	C	BS	0025	-	0145	31391	2527				143	78								
			STO	0030	_	0134	3166	2548	002	5072			89								
			STO	0050		0045	3248	2613	001	3870	0125	_									
	169	C	185	0050		0095	32479	2613				144									
			210	0075		0085	3292	2049	001	5480	0166										
	169	C	85	0075		0085	32924	2049				144									
			510	0100		0100	3328	2678	001	2699	0203										
	169		BS	01 00		0100	33279	2678				144									
			SID	0125		0102	3349	2695		1042											
			STO	0150		0105	3356	2709	000	9721	0259										
	169	C	BS	0150		0105	33663	270 ≠				144									
			510	0200		0057	3387	2724	000	8302	0304	_									
	169	C	18 \$	0200		0057	33872	2724				144									
			STO	0250		0039	3395	2730	000	7803	0344										
	169	C	BS	0250		0039	33946	2730				145									
			STO	0300		0041	3402	2735	000	7240	0382										
	169		ES.	10300		0041	34017	2735	0.0			145									
			STO	0400		0043	3421	2751	000	5769	0447										
	169	0	IB S	10402		0043	34209	2751				145									
			STO	0500		0042	3424	2753	000	5496	0503										
	169	C	8.5	10505	-	0042	34242	2754				145	47								

9001 0 (000 727 (000	CPUISE HUMBER	SHIP	LATITUDE . I 10	IONG/IUDE	i	PSDEN UARE	STATION [GMP]	PLANE HE UIO	YEAR		CRUISE HUMBER		TOE S STATION NUMBER		DEPIH 10 BOTTOM	941 1480-11 15 0)ASE		IONS P WA	- 10	1400 100	CLO	UO			NODC STATION NUMBER
31	1705	WE	78308N	07403 W	260	84	09 03	204	197	0	KBS	00	4		0420	1	0.0	0 0	KC		1	X1	0	2			0004
•			IN FOR ID MOTHER DISCOVERY	ORNACIT ORAPYS SIRM	C BY16 (812) 491	*DT	+	WIND		OME	TER	Ţ	WIT BU	VIS	NUMBE E	SPEC			,	•					1	,	Ì
						CO104	(m)	PO4	CF	mb+1				-	16.451.2	Destina	HONS	4									
							0.	150	8 1	17	-01	9	-026	7	11			1									
		DURATI		PD DEPTH (1 °C	s ·		5444 T		SPECIFIC	VOLUM	mt I	SAD M MYD		JMD .				NT LIG	41						MED SOUND
		MI 5500541	I Nat CASS TY	m Carrie	**1	1 6	,	34	, man 1	1	AN OMALY	- 1 1	10'	F 10 2		SRC	D ₂ m1 1	1	PO, I	-	TOTAL ME OF		MO ₃ —		HO ₅ —N 5	0,-5	ρН
				TD 000	0 -0	0154	3149	2	535		0026	38	7 0	0000	143	372		7			-						
		,504	' 'OB	\$ 000	0 -0	154	3148		535				.		143			1				- 1					'
				100 001		1155	3148		534		0026	44	9 0	026	143	173											
		234				155	3147	_	534						1 43												
		20.		10 002		157	3168		550		0024	87	1 0	052													
		204				157	3177		558			_	_		1.43												
				TO 203)156)151	3179		559		0024			076													
		204				151	3211		585 585		0021	57.) (122													
		20.		TO 007		103	3307		661		0014	2:2:	3 0	167	143												
		204				0.03	33071		661		3014	67.	, ,	101	144												
			S	TO 010		109	3336		685		0012	010	0 0	199	144												
		204	06	5 310	o -0	109	33355		605						144												
				TD 012	> -0	109	3351	2	697		0010	86:	3 0	228	144	42											
				TO 015		110	3364	2	737		0009	63.	9 0	254	1 44	48											
		204	-			11)	33637	_	707						144	48											
		201	-	TD 020		000	3392		721		8000	60	3 0	300	144	-											
		204				1030	33819		721						144												
		204		TU 025 S 025		1053	3400		730		0007	3 () C	3 3	340	144	_											
		20.0		1D 030		1063	34000	-	735 745		222.	. 1		274	144												
		204				1051	34132		745		0006	232	3 (374	145												
		207		Ti) 340		1045	3419		745		0005	et al. S	2 0	435	145												
		204				046	34190		750		000)	002	_ 0	7))	145												

MAR BY 9 M	SHIP LATITUE	04	EONGITUDE = 8		STATION TIM		- ty-	INATORS	DEPTH	SAI SARTI /		WAVE	SHIATW	INSTR		NODC
marter CPUISE	CODE .		EONGITUDE 5	SQUARE	[GMT]	TEAR	CRUISE	STATION NUMBER	10 MOROM	/111		Hoden Tus	1003	CLOUD AMT		NUMBER
DE NAME		-		1 1	09 03 Z		-	05	0310	1		+ +	X1	0 3		0005
31 1 705	WE 7832	14 10	11455 W			i y	1 1	PIRATURE "C	T T	1-		1	1	1 - 1- 1		
* ***	pues their still red \$140-5	06 F1 F1 F0 F1 F0 F1 F1 F1	LLY DOWNER SCHOOL BATA (S	TG and	S'o WIN	SPEED BARON	e fe e	- AL	Oas	SPECIA						
to admi	mi east é le cirilleres s	PRES TREE AT	tan.	STAW FOXOS	FRANS DIE	D# mbs	DOT BUE	# WEE BULB KO	M MARIS	OBSERANT	IONS					
					04	508 11	7 -019	-026 7	10							
	Cast	_	1		1		SPECIFIC VO	1 40		PUTTO		- AMBIENT LIGH	1			SURED SOUN
	DUBA ³ ICH4	CARD	DiFiH (m)	1.,0	5 .	SIGM A — E	AHOMALT	01M	M V110		y w 1, 1	PO, -9 1	QIAL P	NO ₁ -N NO	D1 -N 5.01	S.T
	missene time CASI							1 10		MC			40 00 1		9 14 15	31 319
		STE	0000	-0166	3165	2549	00251	08 000		369		1	,			
	224	088	0000	-0166	31651	2548				369						
		STE	0010	-0165	3165	2548	00251	.07 002		371						
	22+	CBS	2013	-0165	71649	2548				371						
		ST	0020	-0158	31 80	2500	0023+	73 004		370						
	224	nes.	0025	-01.5	31883	2567				381						
		STO	9331	-0154	32 10	2576	00224			384						
		STO	0050	-014R	3243	2011	00130	011		396						
	224	OHS	0.050	-0149	32432	2011				396						
		STO	0075	-0135	3270	2045	00155	015		412						
	224	() BS	0075	-0138	32900	264+				412						
		STE	0100	-0130	3310	2005	00139	303 019		423						
	224	UBS	0100	-0130	33102	2505				423						
		STI	0125	-0119	3350	2696	00109		-	437						
		ST) 0150	-0083	3379	2717	00038	321 025		+63						
	224	0 = \$	T0150	-0003	33712	2719				463						
	224	035	T 01 '9 7	C 0 £ 3	34065	2734				542						
		STO	0200	0060	3407	2734	00074	•23 029		540						
	224	08.5	10249	-0051	34198	2750				500						
		ST		-0051	3420	2751	20056	317 032	-	500						
	224	OpS	10293	-0047	34222	2752			14	510						

-	1 10	1 10 E E E E	10° 1° N 260 84	STATION TIME (GMT) ONTH DAY IN L 09 04 00	1970		SN LB	0201 1 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
med amis shar states to existing		europ ieras bataijē	*DT	IRANS DIR	PED BAROM OB Inhs	Der sute Wiff	BULB K ODE	NUMBER SPECIAL OBSERVATIONS	,
CAST and I lead DUB at ECON and CAST and I lead to the CAST and CA	CARD TYPE	DEPTH (m)	1 'C		04 12 SIGMA - 1	PACENC ADDING	2 80 07N m 2 10'	COMPUTED SOUND VELOCITY == SIC	AMERINI LIGHT, FMO, N MO, 19 F, Og, 51 G, 51 GH, SHE
м. 10 М	STO	ავია	-0165		2545	0025371	0000		
000	OBS	0000	-0165	31616 3165	2545	0025080	0025	14369	
200	STO OBS	0010	-0163 -0163	31653	2548	0027080	0023	14372	
	SID	0020	-0157	31.85	2564	0023557	0049		
000	08.5	0025	-0155	31 753	2572	3021745	0072	14382	
	ST0 ST0	0033	-0153 -0146	3239 3248	2583	0018741	0112		
200	OHS	0050	-0146	32478	2615	0010111		14378	
	510	0075	-0139	3264	2627	0017520	0158		
000	0 H S	0075	-01 49	32036	2627	2 11 2 . 24	2127	14406	
200	STO	01 00	-0125	3314 33141	2668	0013676	0197	14426	
000	STU	0100	-0058	3359	2703	0010314	0227		
000	08.5	10149	-0079	33984	2720			14460	
	STO	0150	-0078	3389	2727	0000066	0250		
000	UAS	10178	-0006	34040	2740			14479	

																				_
900 N1 6 M	SHIP	LATITU	ID4	EONGITUDE	_ 8	#SDEN		TIME		Os	GINATO#	5	DEFTH	ш		WAVE	WEATHER	TINSTR		NOOC
COURTED CRUISE	CODE	CATTO	1/10	4 14		PRAUC	(GMT)	_ 1	64	CRUISE	STAT		10 80170m	1337		SERVATIONS HGT/PER TUS ARE	0004	CEOUD	-	STATION NUMBER
THE NUMBER	116	7024			-		09 04		970	KBS	007	-	0274	1	00	0 X	X1	4 3	1	0007
31 1705	WE	7826	14	07304	1 20	h L			710				7 T	14	00	0171	1 7	7 2		1 0001
* mg ent c	SIAN, FLORES	71 FMG \$1.00F	M ELECTRO	WHELF OF STREET	at 8414 (91%) 464	*DT	*S'.	SPEED :	BAROM		MPTEATU	M =C AIR	NUMM 8 O45	SPECIA	6					
00 00+84.	3 SAME F	9 aUFarrials (enu ini	MIN		WATER BOIOS	TRANS DIR	1000	[mbs]	DRY B	ULB WET	BULB KOD	1EVES	OBSTRVAT	IONS					
							07	512	119	9 -03	3 -0	39 7	09							
	CAST	7 teal	_	7-			1-1-	-				т —		PUTTO		AMBIENT LIGHT				"MEASURED SOUND
	DUBAT	IOH	CAI	DE PTH	tonal	1 °C	5	SIGMA	1	SPECIFIC I		DAM M	VILO	OCITY O	, =((PO - P 10	JAL PT	NO ₃ = N	NO ₃ N S	VILOCITY = ser
	M/7000	CAS TIME CAS TIME MO	T IVE	*						AN OMALI	- 1 10	F 10 3		SEC			9 0 1	wa er l		O S PH
			S	10 000	00 -	0154	3140	2528		0027	040	0000								
	03	5 '	08:		_	0154	31403	2528						371						
				10 00		0156	3139	252		0027	084	0027		371						
	03	5	0.8			0155	31395							371						
		_	-	TD 00.		0134	3150	253		0026	323	0053		385						
	03	5	08			0125	31561	2540						391						
		_		TD 00:		0121	3166	2541		0025	136	0079		395						
	0.3	5	OB			0107	31 972			0033	7.11	0137	_	409						
	2.2	c	08	TD 009		0106	3197 32277	257		0022	121	0127		410 427						
	03	2		10 00		00ი6 0385	3237	2504		J019	757	0180		429						
	0.3	5	08			0084	33148			3019	171	0100		444						
	03	,		10 01		0086	3319	2070		0013	434	0221	_	445						
				TO 31.7		0)99	3348 د	2594		0011		0252	-	447						
	0.3	5	08			0109	33611	2709					_	+47						
				TD 01:		0112	3302	2706		0010	Jo1	0279		447						
	03	5	08			0096	33688							549						
				TO 020			3374													
	03	5	OR				33854													

0001 ST	CPUISE	SHIP	EATITUE	- 1	LONGITUDE	33	MARSON SQUAM	STATION (GM	T)	-	AB	CRUISE		aTION.	I	DEFTH TO	941 1489/1			ATIONS		R SHT	INSTR	-	T	NODC STATION
\longrightarrow	HUMBER			1 16	- 1		D. I.	MCHITH Dat	+	1		PHUMBER		I WEEK	-	MOTTON	/11	+	-	ME AS			PE AMI		-+	NUMBER
31	1705	WE	7827	5N	07332	w 2	60 83	09 04	054	1	₹70	KBS	009			0521	1	0	0 0	X	X	1	4 5			6000
•		USE TOWNS			ment souther to	IAI BEB IAI	MATE COIN	a TRANS D	edit e	OR DE	BAFOM [mbs]	Day B	USB W	TT BULB K		15.4512	SPEC OBSERVA									
		CASI							13 5	ا د	126	5 -03	4	044	7	12			_			-				
		DURATE	-	CAR	DEPTH	/ \	1 'C	5		IGMA	. 1	SPECIFIC V	CIUME		AD m M	SOL	IND .	0, =1		BIENT LIC	, HT					URED SOUNG
		m/4068	10 MO	LAN	7	11111	, ,					AN OMALT	1 10		10'	VELO		J,	PC	4 (C	TOTAL HD of T) ₂ N	NO ₅ - N	10,-1	p H
				S	10 00	00	-0155	3144	, ;	2530)	0026	777	00	0.0	143	71				-	-		-		
		054	1	08			-0155	3143		2530				1		143										
				S	TO 00	10	-0138	3144		2530)	0026	767	0.0	26	143										
		054		OR	S 00	10	-0135	3144	1 2	2530)					14:	81									
				S	10 00	20	-012H	3150) 2	2539	5	0025	350	00	53	143	338									
		054		083	s on	26	-0124	3153	8 8	2539	3					143	3 ₹1									
					TU 00		-0125	3158		25-1	l	0025	734	0.0	79	143	392									
					10 00		-0129	3177		255		0024	239	01	29	143										
		054		08			-0129	31.76		2558	3					1.43	397									
					10 00		-0095	3296		2652		0015	171	01	78	144										
		154		OB:			-0054	5305		2000						1 44										
				S			-0107	3334		203		0012	218	0.2	12	1 4 4										
		354		QH:			-0100	3338		603						144										
					10 01		-0107	3353		2691		0010		0.2		144										
		351			10 01		-0104	3367		703		0009	704	0.2	67	144										
		354		08			-0103	3363		2711						144										
		154			10 02		-00ca	3381		2720		2003	101	03	13	1 4										
		154		UB:			-0004	3383		1721		0.107	7 2 1	0.3	٠,	144										
		054		08	TD 02		-3055	3394		2730		0007	183	0.3	54	144										
		054			TO 03		-0054 -0046	3395		2 7 3 1 2 7 3 5		0.307	24. 4	U 3	3.1	144										
		254		08			-0046	3401		2730		0007	643	0 3	7 L	145										
		,,,,			TU 04		-0046	3413		274		0005	. 2.1	0.4	63	145										
		054		QB:			-0046	3418		749		0000	710	0.4	20	145										
		,,,,			10 05		-0048	3422		275]		10:05	h7/	25	1 0	145										
		054		00			-0042	3421		2752		,000	919	79	10	145										

MALE STATE	CODE	LATITUDE 1 10		NGRIUDE S	MARZDEN ZGUARE	STATION TO (GMT)	TRAP	CPUISE INCOMER		ATION	TO FOTOM	MAC TO		WAVE SEPVATIONS HOTINE TW ME	COOF	CLOUD TYTY AMI		NODC STATION NUMBER
311705	WE :	78299N	-	73440W			75 1970	KES	009		0475	1	00	0 X	X1	4 4		0009
311103	"-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1 .				TIND		I MPT FA	TURE "C	HLIMBE B		1		1		'	,
* 807 1984 1		ING BENEFITS BATTE	19 (1804 (1823) 18 1 (1877) (18	OPENER SERVICE SERVICES	WATER	TRANS DIE	SPEED BARO OF [mi		8418	V13	OBS	SPEC OBSERVA						
					(O1O)	10	\$15 13	39 -0	33 -	043 7	12			1				
	CASI									3 40	COMP	UTED		AMBIENT LIGHT				VELOCITY IN NO
	DUBATIO	+ C	APD	DEFTH (M)	1 °C	3.7	SIGMA:=1	SPECULO		, DYN m	200 200	CITY (0, =1 1	Tuest (10)	Mai P	NO ₃ - N	HO ₃ H	5-D, 5- BH
	W150000 F	IB NO	YN					-		10'	- 1			-9 0011	aport 1	-19 cm 1	-9 = 1	-9 == 1
			STO	0000	-0155	3140	2528	035	7022	0000	143				1			
	075		g S	0000	-0156	31404	2528	0.0.2	3003	0007	143							
			STD	0010	-0156	3140	2528	002	7002	0027	143							
	075		8 S	0010	-0156	31405	2528	002		0.067	143							
			STO	0020	-0155	3141	2528	002	6492	0054	143							
	075		R S	0025	-0152	31406	2528	0.05		0.030	143							
			STO	00 30	-0134	3155	2539		5905		144							
			STO	0.50	-0104	3217	2588	002	1215	0151	144							
	075		B S	0051	-0103	32202	2591	0.01		0177	144							
			STO	0075	-0094	3305	2660	001	4460	0172	144							
	375		HS.	3376	-0094	33377	2652 2003	0.01	1767	0205	144							
	3.76		STO	0100	-0108	33428	2690	001	Tioi	0203	144							
	075		BS	01 03	-0110	3352	2698	10.1	3832	0233	144							
			STO		-0111	3302	2706		0034		144							
	. 7.5		SID	0150	-0111	33627	2737	001	005	0237	144							
	075		8.5	0152	-0068	13021	2721	000	8602	2 0305	144							
	0.75		SID	0204	-0065	33837	2722	330	0002	. 0,000	144							
	075		BS STO	0250	-0065	3374	2730	0.10	7791	0346	144							
	075		85	0256	-0043	33957	2731	350	117	. 0,740	145							
	073		SID	0300	-0043	3404	2737	000	7086	5 0334	145							
	075		88	10308	-0043	34050	2735	500	, 500	, 5554	145							
	075		STU	0400	-0044	3419	2749	0.00	589.	1 0449	145							
	375		BS	0400	-00-4	34198	2177	000	, , ,	,								
	075		85	10457	-0045	34209	2751				145	3.7						
	075	U	0.3	10457	-0049	24502	2131											

SHIP LATITUDE	HOL	GITUDE =	MARSDEN	STATION TIME		OFIGHATOR		D¢ PTH	MAI MAPLE	00	WAVE SEPVATIONS	WEATHE	'INSTB	NODC STATION
TIMERY CRUSH COOK	10 .	+GiTubt =	SQUARE	(GMT)	TAST	CRUISE STAT		EO MOTTOM	///		HGENE TH	1000	CLOUD TYPE AMI	NUMBER
311705 WE 78292		120		09 04 09	-			0503	1	00		X1	44	0010
341,02 45 1,05.45	4 1 01.	410 M			1		- 167	1 1	-	00	1017	^*	1 . 1 . 1	100.0
appropriate plant that and the first-fit	ESSTRUMENTALLY O	OFSERVE SERVE BELLE	Int an Int	*S" WING	MID Brack	AIR TEMPERATU	VIS	OSS OF	SPECIA	4				
MENDON'S ANNUA ST SUSSINES THE	THE MEN		WATER COLOS	FRAMS DIR	OPCE [mbs	DEF BULB WE	F BULL KOD	LEVELS	ORPERAVE	IONS				
					15 13	9 -033 -0	143 7	10						
CAST med Tand			1				3 40	COMP			- AMBIENT LI	Gett i		"MEASURED SOUND
DUBATION	CARD TYPI	DEFTH (m)	1 °C	5	SIGMAT	SPECIFIC VOLUME ANOMALY - 8 10 ²	DYH W	1110	CITY	-1.1	PO _a = P	TOTAL P	THO, -H THO,	-N S. D. S. BH
Hr 1 10 PM							1 10,	-	4-		-9 m /1	40 tr/l		# 7 mg (# 1
	STD	0000	-0163	3141	2529	0026958	0000				-			
096	085	0000	-0163	31411	2529	0031016	002	143						
096	STO	0010	-0165 -0165	3141 31408	2528	0026966	002	143						
040	STO	0020	-0158	3155	2539	0025913	005							
096	DBS	0025	-0156	31620	2545	0027713	002.	14						
3,3	STD	0030	-0156	3168	2550	3024852	0078							
	STD	0050	-0157	3206	2581	0021944	0125	143	387					
396	OBS	0050	-0157	32058	2501			143	387					
	STD	0075	-0107	3282	2641	0015217	017.	3 144	425					
036	082	0075	-0107	32319	2641				425					
	STO	0100	-0111	3343	2691	0011495	050		436					
096	OBS	0100	-0111	33431	2641				436					
	\$10	0125	-0103	3 3 6 0	2704	0010212	023	_	446 457					
095	STO	0150	-0094	3373 33727	2714	0009275	023		457					
095	510	0290	-0073	3384	2722	0008472	030		476					
036	085	0201	-0073	33843	2723	0000416	- 50		476					
0,0	STO	0250	-0060	3378	2733	0007438	034.		492					
296	085	0251	-0057	33484	2733			14.	+93					
	510	0300	0047	3410	2738	0007072	0379	9 145	551					
096	085	T0302	0053	34109	2738			145	555					

100 D1 D D7	SHIP	LATITUDE		LONGITUDE	M:1)	MARSO		STAT		Total	Ţ				SHATO		I	DEPTH	SAMPLE .			WAV	E TIONS		AT A THE	-	STR				DOC
1998 TET CRUISE	CODE		.10	1/10	3 3	SQUA	-	a mortes	(Catt)	- L.		745		MARKE B		FIOH MMF		FOTOM	/	0			P MA		0001	C	OUD	-			TION
311705	WE	7832	N C	7424 W	1	260	64	09	04	15	1	970	K	BS	011		1	0329	1			-	X		X1	0	5	1		00	11
and mate	plant frant	on the Black.	 LECTRONIO A LECTRONIO A	417 00510410 5101A	L MATE (MT	" - F	DT	*S'		1 4	HID CHI	BAR M	44 TE 86		T		·	MUMBER COS.	SPE		4		,			•	•	1		1	'
								-	05		12	13	8	-01	3 -0	28 7	, †	05													
	CASI Oudal	Con CASI	CAND	DEPTH (r	m)	,	٠,	5		3	асана -	-1		CWALL ~		S e I	-	COMP SCA VEIO	ICITY ONL	0, =				HOTA HOTA		NO ₃		NO ₁ N	1.0	MEASURED VELOCITY	
	- T		STO	000	0	-01	.63	31	57	1	254	1	0	025	733	000	0	143	369										1		
	15	1 ' '	DBS	000		-01			570		254					•			369		,		,						1 >	1	'
	1.5		STO			-01			56		254		0	0257	775	002	: 5		370												
	15	ı	DBS STU	001		-01 -01			562 59		254 254		a	0255	550	005	. 1	143													
	15	1	085	002		-01			605		54			927.	, , ,	902	•	143													
		-	STO			-01			90		256		0	0231	94	007	15	143													
			STO			-01			75		263		O	0166	686	011	. 5	144													
	15	1	280	005		-01			749		63		-			015		144													
	1.5	,	STO	007		-01 -01			104		266		0	013-	162	015	4	144	19												
	15		DRZ	007	2	-01	20	3 2	TOA	- 4	. 00	2						7 44 4	13												

400 B1		SHIP	LATITUD		LONGITUDE	_ B MARSO	DEN	STATION	i Tia	ΑĒ		00	HGINATOR	5	DEPTH	841	Т		WAVE			"INST	P			NODC
	CPUISE (3000		, ,,	· LID	B SOUAL		(Ga			All	CRUISE	\$1A1		01	SAMPLE	1		ERVATI		CODE	CLOP			1	STATION
-	- Banklin				7710	9 10.	-	ONTH DA	-	-274	_	NUMBER	-	100 7	опо	- 1	-	+	-	168 48	11	TYPE A	-			NUMBER
311	705	WE	7836	N	074415W	260	64 (09 0	4 1	64 19	970	KBS	012		021	0 1		00	0 X		X1	0	5			0012
						•	DT	*S".	WII				EMPERATU		NUMBE	e seri										
	OF STREET	OL TIMES	T ASSESSMENT OF	91,31 700 1 00 700 1	MINISTER SERVICE SERVICE MANAGEMENT		WATER	TRANS	DIR	SPEED	MOTAE (dm)		NITE WE	ANTR K OD	O65	041189										
							COLOR	{m}	-	POPCE					TEAET	3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0										
									05	512	138	3 -01	B -0	28 7	38											
		CAST DURAT	Time!	CAR	n.							SPECIFIC	VOLUME	SAD		SOUND		-		47 LIGHT	T .					SUPED SOUND
		m 112044	E frau CASE	TYP	DEFTH IN	n) T '	*c	5 ,		SIGMA	1	AN OMALT		DYN A		FLOCITY	0, -	1 1	PO, -		OFAL PT	NO, N	T NO	-NT	5.0, 1	OCITY # 141
		M.	10 NO	_					-		-					= SEC		_	ung est		ong at /1	wg on I		y 07 i	140 mt	p ^M
					10 000	- 1		315		2536		0026	060	0000		4367					1					
		164	4	DR:				315		2538						4367										
				S				315		2541		0025	787	0025		4309										
		164	•	085				315		2541						4369										
				S				3177		2554		0024	544	0051		4377										
		164	†	083				419		2501					_	4330										
				S 1				315.		2570		0022		0074	1.	4334										
				SI				3234		2603		0019	791	0117		4397										
		1.64	•	DB S			45	3234	+1	2603	}				1	4397										
				S 1				3270		2032		0017	007	0163	1	4410										
		164	•	UB S				3269		2032						4410										
				S 1			-	333		25114		0012	154	0.200	1	4435										
		164	•	003			-	3334		2604					_	4435										
				\$ 1				335		2703		0010		0228		4449										
				51				337:		2710		0019	098	0.252	1	4460										
		164		ORS				337		_715)				1	4460										
		164		DR S	019	00-	75	3393	5 3	2724					1	4474										

																		-		_	
909 B1 0 B0	SHIP	LATITUDE		LONGITUDE		200 614		TIME			GINATO#		DEPTH	BAZ		WAV		WEATHE	INSTR		NODC
THE TY COUSE	1000	1 11	10	1 10	10"	ta at	[GM1]		rê A#	CEUISE NUMBER	STAT		OT WOTTCH	1000		AVESON	TIONS	0008	CLOOD		MUMBER
311705	WE	7023 N	-	07336 W	260	63	04 04	and the same of	970		013	-	0274	1	00	4		X1	3 5	-	0013
311103	M.C.	1053 14	, ,	31350 W	200				710	ا يسل			T T		1		^ ("1	1313		0013
B 001 FME 1	CLES TIMES	17 100 BLASTON D.E	PCT9 296 ×	NATIONAL SERVICE	101 1791 4149	DT	*S".	WIND	BAROM		mPtBall	41 °C V15	POLIMBE P	SPEC	AL						
		Bone Chialitre	7461 65	Rid		WATTA BOJOD	TRANS DIE	OF	(mbs		us wt	T BULB KOD	005 (EVE)3	OBSERVA	TIONS						
						COLON	04	500	13	6 -01	7 -0	25 7	10			-					
	CAST	Const.		-					1 4 3	0 01	, ,	-	1 1	Pullo		-	ENT LIGHT				MEASURED SOUND
	Duest	8394	CARD	DEPTH IA		F 10	\$	SIGMA	_,	SPECIFIC	OLUM	PAO DTN M	50	UND .	0, =1	1 6					VELOCIPY = sec
	-1986	g riggi CAST	TY PE	DELIN IN	"	, ,	\$	310=1		AN OMALY	1 10	F 10 5		MC C	,	PO,		DIAL P	NO ₃ -N		g= \$1 gH
	-		ST	000) -0	143	3139	252	6	0027	185	0000	114	376		-					
	120.		16.5	000		143	31386					1		376		1	- 1				1 1
			STI	001) -0	143	3135	252	2.6	0027	184	2027	14	378							
	20	2 ()	18 S	001	0 -0	143	31365	252	6				14	378							
			ST	002	0 -0	139	3140	252	7	3027	084	0054	14	381							
	20	2 0) HS	002	5 -0	135	31470	253	3.3				14	385							
			STI	003	0 -0	1.2	3171	255	2	0024	719	0030	14	395							
			STO	0.05	0 -0	J69	3248	401	3	0013	859	0123	14	425							
	20.	2 0	1115	005	J - 0	1089	32483	261	. 3				14	425							
			ST	007	5 -0	092	3303	205	0.6	0014	540	0165	14	435							
	20.	2 ()	185	007	5 ~0	1042	33030	265	8 -				14	435							
			ST	010) - (0.50	3338	260	5.5	0011	197	0199	14	445							
	20.	2 U	J b S	010	0 -0	000	33375	26:	55				14	445							
			STO	012	5 -0	101	3344	269	91	0011	467	0228	14	445							
			STI	015) -(105	3350	26	16	0010	983	0255	14	448							
	20	? 0) h S	015	J -0	105	23449	56	9.0				14	448							
			511	0 0 0) -(039	536i	270		0010	165	0309	14	466							
	20	2 () it S	020		0 R 7	13509	270					14	456							
			SI	025	J -0	175	3350	271		JJ05	751	0356	14	483							
	20		200	025) -0	075	33503	£71					14	483							
	20.	2 0) d S	J25) - C	JE 3	33420	274	. 1				14	491							

man 700 C A 400 A	SHIP LA	ATITUDE	10	DNGITUDE 1 10		PSOFN UAPP	STATION (Ga	ATJ		TAF	OF CPURSE HUMBER	STATE NUM	ON	DEFTH 1Ö BOTTOM	BAZ MAPU 50		WAY DESERVA		CODE	CLOUD		NODC STATION NUMBER	
311705	WE 78	1 858	A 3.	7328 W	260	83	09 04	21	5 1	970	KBS	014		0503	1	0.0	0 0	X	X1	3 6		0014	
	m Demonstra	. Profile S	AL EROPET AND	T MEGREE SIELE	sala att. at	"DT	*S".	WIN		BASOM		MPIBATUR	" °C VIS	PRUM BE B	SPEC	LAI							
	BARRE B1 6571 F	P15E5 970E	THE ME	4		WATER	+	DIR	OF OR HORCE	[mbs		U15 W17	8U19 E OD	OBS IEVELS	0458897	TIONS							
						COLON	1 1	-	08	1 3	-01	4 -0.	25 7	11									
	[Cast god Fine]						1	-		1				COMP	uno T		AMBI	ENT LIGHT				MEASURED SOUND	1
	BURATION	CAST MO	EARD	DEPTH I	~)	T *C	3 -		SIGMA	-1	SPECULO		9 & O O P M E 10 ⁵	VELC		0; =1	PO,		ZAL P	NO ₂ N	HO5 - H 5. 6	VELOCIPE =/ set	
	-		STD	000	0 -0	137	314	7	253	3	0026	577	0000	143	180								
	215	(BS	030		137	3140		253		0000			143				1				1 1	١.,
			STO	001) -(137	3140	5	253	2	0026	586	0026	143	391								
	215	- {	JHS	001	0 -0	1137	3146	5 5	253	2				143	881								
			STO	332	0 -(1131	315	7	254	0	0025	806	0052	143	367								
	215	(Jr: S	J05		129	316.		254					1.43									
			STO	003		1125	31 %		255		0023		0077										
			STU	005		1112	364		200	5	3019	393	0120	144	13								
	215		JH S	007			329																
			SID	007		102	329		265		0015	187	0164										
	215	-	JES	009		NY ()	332		267					144									
			STO	010		095	3330		208	0	0012		0198	-	40								
			STU	012		102	334		209		0011	115	0550										
	215		102	014		11 05	3360		270					144									
			STO	015		102	336		270		0010	020	0254										
	215) is S	.19		.776	337		271					144									
			STI	070		073	338		272		0008	724	0 30 1	144									
	215	(005	024	1 -(00c-1	3311) 5	272	7				144	90								
			SID	025	n - r	000	339	l	274	8	0007	459	0343	144	91								
	215		JB S	02.6	9 -(0057	339.	+ 7	273	1				145	00								
			SIJ	0 + 0	0 -(0055	339		273		0007	101	0381										
	215	(38 S	15"	6 -(1045	341	78	274	4				145									
			SIL	040	0 -(045	3 → 1	9	274	9	0005	304	0448	145	27								
	215	(DHS	04.5	3 -0	1045	341	3.4	274	j				145	33								

														-		-	-							
901 0		SHIP	LATITUDE		LONGITUDE E	MAR:			IME			GIMATO		_	DEFIN	MAPLE /		OBSE	VAVE	NA S	WE ATHER	"INSTR	_	NODC STATION
-	CRUISE	CODE		10	l ĝ	5 10°		(GMT)	- 0 - TE	14	CRUISE NUMBER		MOIL		MOTTOR	//	1	-	Transfer .	us sai	C004	CLOUD TYPE AM		NUMBER
2.1	1705	WE	78293		7346 W	260	-	-		70	KBS	015		-1-	0530	1	+-	-	X	-	X1	0 6		0015
J.	103	1	10233	1 0	// J40 m	1200			riego	10		MPIRAT	· "C	1		1.	10	-	′1^	1	1 ~ 1	0 10	1	10013
	-	eve. Ren	ATT 100 TEAMINE (1,30 TB (IB+) (A	KET DESIGNED SERVE DA	Law (276) at	'DT	'S ' ₀	SPEID	LAPOM	t to a			AIZ	OB5	SPEC								
	E 494	E1 64000	PT ASSESSED MANUEL	141 67	tar .		WATER COLOR	(m) OW	FORCE	(mbs)	Day a	W W	EF BULB	CODE	tevers	ORSERVA	TION	5						
								0.2	512	146	-02	8 -	034	7	12									
		CAST	_100		T	1			1	1			Τ.	I AD	COMI			-		THESE T	-			ASURED SOUND
		Dulla	18,394	CARD	DEPTH (m)		€ "C	3	SMGMA -	1	SPECIFIC :		, 01	IN M	VELC		0, =		PO, -		HAL PT	NO, -N	HO, -H 5.0,-	BLOCIFY =/ to-
		M-270400	T to HO	TYPE				-					, a	10 '	-	SEC			148 04		1.00	reg at 1	reg or 1 reg or	
				STO			148	3143	2530		0026	849	0.0	000	143									
		22	9 '	0B S	0000		148	31429	2530						143									
				STD			146	3145	2531		0026	703	0.0	126	143									
		22	9	085	0010		146	31447	2531						143									
				STO			138	3145	2531		0020	685	00)53	14									
		22	9 (085	0025		137	31472	2533						143									
				STD			151	3154	2536		0025)79	14									
		2.0	-	STD			165	3179	2500		0023	953	01	129	14									
		22	7 1	085	0.050		165	31794	2500		001/	00.			143									
		22	0	STO OBS	0.75		054 054	32988	2054		0014	993	U I	178	144									
		22	9 (S I D			102	3328	2654		0012	- 90	0.5	213	144									
		22	0 1	UbS	6100		102	33279	2678		0012	007	0 2	213	144	-								
		22	7	5T0			102	3350	2698		0010	0 ~ 1	0.2	242	144									
				STO			103	3367	2710		0009			268	144									
		22	0 .	942	3153		103	33659	2710		0009	011	0.2	_00	144									
		2.2		DBS	0199		058	33620	2721						14									
		7. to	,	STD			068	3392	2721		0006	63A	0:	314	144									
		22	9 (085	0248		252	33905	2721		0000	0,0			-	+ 75								
			,	STD			052	33 71	2727		0008	001	0	355	144									
		22	9 1	088	T02 57		051	34050	273						145									
				510		-	051	3405	2739		0006	908	03	393		536								
		2.2	9 (OBS	0393			34176			- /	, -			-									
				STO	0400	-0	047	3418	2745	9	0035	925	04	457	14!	526								
		22	9 (DBS	T0+8a	-0	043	34238	2753	1						544								

			Т			Т	STATIO	u 7:	ME		0	RIGHNA	108.5	-		841	T	w	A VE			INSTR			HODC
IOMPTO CRUISE	SHIP	LATITUDE	LONG	SITUDE		#SDEN UARE		altj.		EAR	CRUISE		STATION	-	TO	SMETI /	C		MOITAN	5	WEATHER		=		STATION
1 Mar PRUMBER	CODE	* 1 10		1 10	9 10"	1 °	ONTH D	AY HI	V10		NUMBER		NUMBE		#OTTO#	/111	Diff	HG1	PEB	188 61	COOL	TIPE AN	ır.		NUMBER
311705	WE	78303N	274	06 W	26	0 84	09 3	5 0	1 56	970	Kas	01	6		0430	1	00	0 0	X		X1	0 5			0016
1			1		,	'DT	*S"。	W	IND			TEMPER	ATURE "		NUMBER	SPECI									
100 F1	SING TEMPLATE SINGSTERNESS OF 1	TOE BEADING BLEET NECKSINES WINDOWS	FORFULLE DES	SIPMB WELL	8414 (875) MI	WATER	D 0	DIE	SPEED	BAFOM!		BULB	WET BU	N K ODI	045	OBSERVA									
						COLOR	[m]	0.0	FORCE			2.0	0.2.	-	1			-							
						<u> </u>		02	512	14	5 -0.	28	-034	7	12										
	CAST and T		- PD		1				SIGM A		SPECIFIC	VOLU	ME	DAE M MTG	50	PUTFD UND			fum cm						OCITY
	M11/04/4		PE	DEPTH Im		1 °C	5	••	SICIMA -	'	AN OMAI	* 4		1 10,	41.10	SEC C) =1 I	- 1 -	$O_a = P$ $\log \cot I$		fat = P g ot/l	NO ₅ = N agail I	NO ₃ -N Mg qt, I	5 Og - 5	PH
	Mr. I	10	510	0000) -	0103	315	4	253	9	002	597	3 (0000	1 14	369		-				-			1
	002	1 108		0000		0163	315		253		002		, ,		1 -	369		- 1		1 :				1 4	1
	302		STO	001		0163	315		253		002	599	6 (026		370									
	002	0:		J01		0163	319		253						14	370									
		1	STO	002	0 -	0160	317	.5	255	÷q.	002	+53	5 0	051	14	376									
	502	Gr	s \$	032	5 -	0158	318	135	250	3					14	379									
		1	STU	003	o -	0156	320) U	257	Ó	0.02.	244	2 (074	14	383									
		:	STO	035) -	0143	J25	5	262	0	001	819	0 (115	14	400									
	002			215		3143	12:		202	Ü					_	400									
			STO	007	5 -	0113	330		266	0	001	4 4 ()	13 (1156		420									
	005		2 S	037		01.3	33.		260							425									
			STU	010		0112	331		266		Jel	368	8 (191		432									
	J02			01.0		0112	3.32		266							432									
			STO	012		01:0	334		201		001			222		441									
			STO	015		0104	330		270		000	¥70	14 (1248		451									
)02			015		0104	330		270		220			9 2 3 2		451									
	202		STO	02.0		0000	331		272		000	グラン	5 (1294		473 473									
	002		5 FO	020		0016	335		272		000	7 1	s /	334		413									
	002			025		0000	33:		273		000	1 4 1) (1)))		490									
	002		3 S 5 T D	1025		0055	340		274		000	~ H.1	2 (370	_	503									
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	002		5	035		0053	341		274							515									
	002		: 3 : TU	340		0050	341		275		200	57 H	7 (0 4 3 3		525									
	002		5	T043		0356		.) 4	275		300	210		, , , ,		526									
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900 BT 9 BT	SHIP	LATITUDE		LONGITUDE	8 masso 2 100a	STA		UME		OWI	GINATOR		DEPIN	BAJ		WAV		WEATHER	INSTR			NODC
committee Carunsa	1000		10	1 10			(GMT)	YEA		CRUISE HUMBER	STAT		OT MOTICE	111	1	SERVAT	P MA SAT	1003	CLOUD AM			STATION
1000 HUMAFE					- + -	-	H DAP H		70			-		1	00	0)	-	X1			-	0017
311705	#E	7832	N	07423 W	260		4 4	014 13	10		017		0347	1	00	1017	- 1	V.1	4] 5	1	1	0017
* *** ***	Comp. Disease at	1 100 0140 05 0	1.86.79 min r	ALC: ORSERVE SERVE	Serie official	DT 'S	0 4	TIND	A POME		MPIRATUR	1 °C	PRUMBER	SPECI	A.I							
0 th 10	1 BARRE 81	\$338 0 /587 MARIE	1616	Plat I			INS DIE	DB FORCE	[mbs]	D81 8	US WES	BUILDO	O45 IEVELS	ORMEYA	IONS							
					-	COLCE !	02	-	146	- C2	8 -0	34 7	10			1						
	CAST	Total						322					A	PUTED		* AMBII	NT LIGHT.				*minso	MED SOUND
	OUTAIL	abo	CAPD	DEPTH UM		٠,	s	SIGMA 1		SPECULC I		S AD	140	DUND	, -1 1		-1-4	Т				CITY OF NO
	m / De tot	TIME CASE	EV PR					1		AN OMAL!	1 10	a 10 °		SEC		PO _a		TAL - F E 01/1	NO ₃ —N rg or 1	NO ₃ N	HE PT	g-24
			ST	0000	-01	56 3	134	2523		0027	493	0000	14	369								
	016	, ' (DBS	0000	-01	56 3	1343	2523					14	369								,
			ST	0010	-01	56 3	135	2523		0027	447	0027	14	371								
	016	1	UB S	001	-01	56 3	1348	2523					14	371								
			SI	0020	-01	.55 3	144	2531		0026	720	0054	_	374								
	316	1	068	002	-01	55 3	1514	2537						376								
			ST	1 00 U	-01	.51 3	163	2546		0025		0080		380								
			ST	0050	-01	.39 3	214	25n7		0021	365	0127		397								
	016		085	3)5.	-01	.39 3	2136	2507						397								
			SI	007	-01		288	26-7		0015	000	0173		415								
	016		C a C	007	-01		2882	2547						415								
			ST	0 010.	-01		323	2675		0015	017	0209		431								
	016		065	01 00	-01		3231	2675						431								
			STI	0125	-01	.01 3	355	2700		0010	601	0238		447								
			ST	0 015	00)86 B	370	2718		0009	881	0263	3 14	450								
	016)	085	0150	-00	38 3	3781	471 ك						400								
	016)	ObS	1019	-00	70 3	13959	2733						479								
			SE	0200	-00	70 3	397	2733		0007	502	0304		479								
			SI	025	-00	063 3	401	2736		0007	183	0340	14	491								
	016)	08.\$	1029	-00)58 3	4079	2743						503								
			SI			158 3	410	2743		0006	515	0375		503								
	716	2 1	UBS	T031	-00) > 6	4147	2747					14	508								

9991 EF G B0	SHIP	LATITUDE	10	ONGITUDE		MRSDEN QUART		n Timi	- 1	AT	CBUISE	IGINATOI 51A	TION	DIFTH TO	BAN SAMPLE		06	WAV SERVA	re NIONS		WEATHER	CLOUD			NODC STATION
1000 PECHSE 1000 PECHSE		* 1.1	0	1 10	8 10	_	MONTH D		10		PRLIMAER R	NU	486 P	BOTTOM		187	Doll	HGT P	PER SE	101	COOT	TYPE AM	4		NUMBER
311709	5 WE	78332N	0	7435 h	26	0 64	04 0	5 02	7 19	70	KB\$	016		0296	1		00	0	Х		X1	3 6			0018
	,					"DT	*S"。	WIN		BAPOM		MPIBATI	21 ser	NUMBER	SPI	r ClAi									
100 VIII	e pusc ham have sweet t	La STATBAPEP mangar PAT 1995 BLPM BRY (F)	CERT NPFE S	IE OGNINIG NEH M	BRIS (BLO) o	WATER	TRANS	DIR	SPREO Of	[mbs		WE WE	1 8418 8 00	1614112	D45ER	VATIC	ins.								
						COLO	+		10	1.4	1 -01	7 0	22 7	05	-	_									
	Cast	Tund!					-	01 3	10	16	LOI	1 50	22 7		m FUTEO	_		ANBI	RMT D	GHT.				Testa	SUREO SOUND
	0.44	8,9%	CAPD	DEPTH (n		1 °C	5		SIGMA -	,	SPECRIC		Over a	54	DUMD LOCITY	0,		- by	un en					-	OCHY = un
	m1986		PEPE								AN OWAL!	8 10	1 10		M €	E		19	or 1		AL P	MO ₃ N mg at 1	MO ₁ 0 Mg sp /7	1 5.0 p	p. P.H
			STO	0000	0 -	0168	313	7	2525		0327	257	0000	14	364									1 .	
	102		88	0000) -	0168	313	71	2525	,				14	364										
			STD	0010) -	0165	314	1	2529)	3025	921	0027	14	367										
	0.2	7 ()	d S	0010) -	0145	314	14	2529)				14	367										
			SID	2.00) -	0151	318	2	2561		0023	535	0052	14	332										
	0.2	7 0	BS	0023	> -	0146	31 7	79	2574	-				14	387										
			STE	003) -	01-0	320	7	2551		0021	927	0075	14	380										
			STU	015.) -	0147	324	1	260:	9	0019	200	0116	1 4	337										
	0.2	7 (/	ts S	0050) -	0147	324	0 ;	2605	j				14	397										
			STO	037	5 -	0132	32 8	Lq.	2643	}	0015	003	0160	14	414										
	3.5	7 0	H.S	007:	-	01.52	320	3.7	2643	3				1.4	-14										
			SIO	0100		0123	331		2005	5	0013	504	0197		427										
	0.2		62	01.00		0123	331		2568						427										
			STU	01.25		0104	334		€ 689		0011		0229		441										
			510	0:5		0000	336		2705		0010	080	0256		454										
	0.2		is S	011		27-6	3.16		2735					_	454										
			510	02.00		0072	337		2729		J007	888	0301		478										
	12		HS.	T020		0072	339		272						476										
			STO	0251		0070	33 -		c 132		0007	655	0340		487										
	02	7 0	F/ 5	TUZ 75	-	001 1	330	61	2732					14	492										

								_												
200 01 0 %	SHIP	ATITUDE	LONGITUDE	_ 8 MAI	SDEN	STATION T	IME		ONG	MATO# 5		DEPTH	BAE		WAVE		WEATHER	INSTR		NODC
COUNTRY CPURSE	CODE .	1 10	. 1 10	3 3	PRAIL	(GMT)	TEAL	•	CHUISE NUMBER	STATIC		TO BOTTOM	1001		SERVATE		CODE	CLOUD		STATION
	7.C		07310	-	+		070 19	70	-	19	-		1		O X	+		THA PAYS		B SANUH
31 1705	WE 78	355 N	07310 #	1260	-	444	_	10	-			0320	1	00	o x	1	Xl	0 4	l	0019
9011 PHIS II	106 TIMPINT POR	PINE BUILDING	MICALLY DESIRED SING	L BATA (BTS) 1642	*DT	*S'。	SPEED BA	POME	TER TEMP	HUTAUM	VIS.	NUMBER 280	SPECIA	L.						
4004	MANGE BY ASSESSMENT	INS PHIC TRI	MPR NA		WATER	IRANS DIR		[mba]	DRY BULL	s wer	BULB CODE	IEVELS	OBSERVAT	ONS						
						04	512	171	-045	-05	2 7	10								
	Cast and limit				1			1				COMP	UTEO		AMBIEN	if LIGHT.			, * A4	CONTO SOUND
	DUBATION	CAI	DEPTH I	m,	F*C	5	SIGMA1		SPECIFIC VOI		A AD	YELO		-1.1	- Ive			т-	1	ELOCIPE IN 1912OLE
	minace um	CAST ITE									# 10 ³	- 1			PO ₂ -		FAL P	MO ₂ N I	nd ea∖ 1 md ea	
			10 000		157	3126	2517		00280	92	0000									
	070	08			157	31265	2517					143								' '
		_	TD 001		157	3128	2517		00280	00	0028									
	070	OB			157	31276	2517		00271		0011	143								
	370		TD 002		137	3139	2526		00271	66	0055									
	172	OH	\$ 002 \$00 01		131	31+60	2533		00251	1 7	0081	143								
		_	TU 005		137	3230	2600		00201		0127	144								
	070	OB			137	32301	2600		00201	20	0121	144								
			TU 007		137	3300	2656		00147	55	0170									
	070	GP.	S 007		137	32978	2000					144	-							
		S	TD 010) -0	136	3317	2571		00133	83	0205	144	21							
	070	σ۵			136	33175	2671					144	21							
		_	10 015		112	3345	2692		00113		0236	144	40							
			10 015		054	3365	2708		00098	61	0263									
	070	DR:			094	33650	2709					144								
		_	TD 020		079	3383	2722		00385	J5	0309	_								
	070	OR:		-	079	33H37	2722		000.5	. 7	03//	144								
	070	_	TO 025		052	3411	2743		00055	L	0346	_								
	010	UB:	S TU25 TD 030		052 031	34113	2744		00043	07.	0373	144								
	377	0B			030	34411	2767		00045	7**	0515	145								
	7.7	015	3 1370	0	050	24411	5101					243	C 1							

1001 01 0 16	SHIP	LATITUDE		ONGITUDE	_ 8 M	APSDEN	STATIO		TIALE		01	IGHA FOR	5	DIF	tn a	AT		WAY			INST			HODE
COUNTRY CRUISE	CODE		10	1 10	0.0	DUARE		GMT)		TRAF	CRUISE		HOH n#4#	10 00TF		/17/		BSERVA		CODE	CTOR			STATION
	-				-	_	HTHOM	-			-	+	-	+			DiB	+	TD NA AM	+	TYPE A	-		NUMBER
31/1709	5 WE	79192	in] c	172238W	20	0 92	-	_		1970		020		029	28	1	00	0	X j	X1	0	3		0020
9 NOTE WAS	e muse number	105 E148/05	ELECTRONIC A	LIT OFMEND WELL	mata (BES) 16	. DT	*S".		SPEED	BAROM		EMPIDATU	61 ,C A1	NUM		SPECIA								
PT 000	HALL BLANCE PT .	HARINE AM	B 181 677	м		COLO		Die	O4 FORCE	(mbs		BULB WE	1 BULD KO	OE CEVE		PERAT	IONS							
						COLO	-	02	510	17	6 -02	23 (34 7	08				-						
	CAST and						+	102	310	110	0 1-02	.) _ (134 11		COMPUTE	10.]		- 4 14 9 15	INT LIGHT				Tasta	SURED SOUND
	DUBATIO	P4	CAPD	Distre (e	.	t 'c	· .		SIGMA	-1	SPECIFIC		9 & E	' I	SOUND		-11	lu	m rem ¹				· VII	OCIF m m
	M19960	(a51 10 T NO	PEPE								AN OMAL I	1 10	F 10	,2	m SEC			PO ₂		Oyfat = P Hag on, I	NO ₂ — N	NO ₂ -	5.0 ₃ -5	
			STO	000	0 -	0150	31	22	251	3	0028	3419	000	0 1	1437	0								
	138		OBS	000	0 -	0150	31	224	251	.3			*		1437	0		,	,					
			STO	001		0143	31		252		0027	7084	002		1437									
	13B		DBS	001	0 -	01+3		398	252	2.7					1437									
			STO	JU2		0140	32		257		0022	2271	005		1439	-								
	138		OBS	002		0138		272	259	98					1439	-								
			S T ()			0137	3.2		200		001		007		14.9									
			STO			0132	32		500		0019	822	010		1441									
	138		08 S	005		0132		863	264						1441									
			STO			0127	33		267		0017	3140	014		1442	_								
	138		08.5	007		0117		212	267						1442									
			STO			0098	3.3		2.70		0009	9937	017		1444									
	138		OBS	01.0		0398		654	270						1444									
			STO			0083	3.3		272		0.009		019	-	1445									
			STO			0063	34		272		0007	1325	021		1447									
	139		OBS	1015		0063		994	273		003		0.24		1447									
			STO			0003	34		277		0003	5 5 0 0	024		1451									
	138		OBS	1050	0 -	0009	14	56 O	277	0					451	0								

					-				-	_	т —			-	_		T -				+	T	1		
100 H 0 M	SHIP	LATITUDE		ONGITUDE	2 8	MON P SIDE TO	STATIO		LAMÉ		-	- 1	NATO4		DEPTH	MAR MARY			WAYE	ONS	WEATHE	CLOU			NODC
IN PUMBE	1000		10	. 1 10	3 8	10" I" M	3) HTMD	SARE)		EAF	HUM		STAT		10 HOTTON	. /			ctime		1000	ITPE TA			NUMBER
311705	WE	79402		71175 W	-	-	-	\rightarrow		970	K8	5 0	21		0238	1	0	0	OX	1	XL	0 1			0021
21/2102	45 1	17106	, •		1 1-		(Barro	v	VIND	T -	1	LIGHT BEAM	PREATUR	H 'C	NUMBER	1		_	,	1	1		'		
0 mm vms	SUS REPLA	1 100 CIAP NO. 0	1.1079 (Mart A	OF DESIRED SERVI	9419-1975		S °	1	SPHID	BAPON		_		NIE KODE	280	SPEC COSSERV									
0.00	1 manua #1	PRINTED AND	101 20	140		BO303	TRANS (m)	Dell	POPCE	[mbr		_	1-		111113	O B	a - ncorea								
								0.7	\$08	18	0 -	033	-0	39 7	09										
	CASI	Freed	-								SPEC	aic no	LUMI	TAD		MPUTED:		- 1	AMBITH						DCITY - M
	DURATI MISSIPHI	-	CARD	Di PTH (A	NE .	1.70	3	* *	SIGMA	_1		MALF		01N M	VI	LOCITY	0, -1	'	PO, -		OFAL - F	NO ₃ N		1 5 0,-3	- рн
		10 ° NO		-						-		207		-	-+	+		- +	-6 -	1	ager I	10 m	org or 1	Hell on ,	
			STO			-0140	311		250		00	1257	91	0000		4374 4374									j
	175		088	000	-	-0140	317	178	250 251		0.0	1284	72	0028		4373									
			510			-0148		22 216	251		00	1204	12	0020	-	4373									
	175)	08 S ST0	001		-0146	31		256		0.0	234	5.8	0054		4384									
	1.75	-	0 p S	002		-0145		129	258		00	1637	,,	0054	_	4389									
	L	,	S T C			-0144	32		259		0+1	203	4.2	2076		4393									
			STO			-0138	32		284			162		0113	_	4406									
	175	5	065	005		-0139		802	254							4406									
	4.1.	,	STI			-0122	33.		268		0.0	119	49	0148	1	4425									
	17	5	085	307		-0122		370	261	6					1	4426									
			STO			-0101	33	65	270	8	0.0	098	20	0175	1	4444									
	1.75	5	085	010	0	-0101	33	655	270	8					1	4444									
			SII	012	5	-0077	33	96	273	2	0.0	075	30	0197	1	4464									
			5.10	015	0	-0054	34.	21	275	1	0.0	057	70	0214	1	4482									
	1.7	5	085	1015	0	-0254	34.	207	275	_						4482									
			STU	020	0	-0713	34		277		0.0	0034	59	0237	_	4514									
	1.75	5	08.5	1020	0	-0013		536								4514									
	17	5	088	1022	U	-0016	34	534	277	6					1	4516									

(000 (01 (0 00) (000/02 CAUSS) (000 NUMBER	SHIP LATITU	1 10	LONGITUDE \$	MAPSDEN SOUARE	STATION TO IGMT] MONTH DAT HE	YEAR	CBUISE STATE	OH	DEFIN TO BOTTOM	MENT /		WAVE SERVATIONS HGT MR THA L	wearse CODE	TYPE A MI	NODC STATION NUMBER
311705	WE 8011	N	06942 W	907 09	09 05 2	15 1970	K85 022	1	0293	1_	0.0	0 X	X1	0 3	0022
© (6)11 946 (6)404	COMPTENS THE STAP S MANUS BY ASSESSED	00 (((((P00+)	actif desalembi sienas mats Miaa	PDT water	TEANS DIR	SPIED BAPON OR INDI-	of Der Buts with	\$U(\$ 00)	045 167615	SPECIAL COSSERVAT					
	Dukation Dukation myself is Cas		Dirin (m)	1.0	s	\$10 17	SPECULE VOLUME	34D 940 101	COMP SOU VIIO	CITY O	,	AMBIENT LIGHT	OTAL F	NO ₃ N og of i	VELOCITY = AN
		ST	0000	-0148	3180	2560	0023903	0000	143	79					
	215	OHS	0000	-0148	31801	2560			143						
		51		-0152	3179	2559	2024019	0324							
	215	035	0010	-0152	31794	2559			143						
		ST		-0143	32.22	25 94	3023721	0046							
	215	Ohs	0125	-0147	32433	2609			1 4 3						
		5.1		-01-7	3252	2010	0013414	0065							
		51		-0147	3239	2653	J015052	0099	144						
	215	URS	0050	-0140	3246)	2053	0011543	0132	_						
	217	ST		-0123	3342	26+0	0011545	0132	144						
	215	OES ST	0075	-012J	33423	2690	0003622	0157							
	215	005	0100	-0093	1352	6721	0005022	0101	144						
	21)	51		-0073	3+05	2739	0006904	0177							
		5.1		-0043	3423	2753	0005577	0192							
	215	CIP 5		-0063	34229	2753			144						
		ST		-0035	3446	2709	3004094	0217							
	215	08.5	02:00	-0035	34438	2709			145	02					
		ST		- / 312	3457	2778	0003221	0235	1.45	23					
	215	UBS	10250	-0012	34558	2778			145	23					
	215	035	13630	-001?	34576	2779			145	28					

-	SHIP	LATITUDE	Π.	ONGITUDE :	E mat	SERM	STATION	TIME			ORIGIN	MOTAN	5	DEPTH	MAZ		WAVE	T	TINSTR		MODE
TORRITE CHUIS	4 CODE	* 1/1		. 1 10	3 1QU		ICM		TEAR	(BUIS		STATI		10 MOTION	31001		SERVATIONS	WEATHER	CLOND		STATION
3 1 1 7 O				- 1	B 10		OC DE		1070	-	-				1	-	HGT PER US AND		Turk Jays	-	NUMBER
31 170	15 WE	8011 N	10	6910 W	907	09	09 35	230	1970					0311	1	00	0 X	X1	6 2		0023
9 000 00	nce street floor	CT - CO. B. DO. WO. D. D.	C Titrianni en		MA SPECIAL	*DT	*S"	WIND	BARON		R TEMPI	PATUR	l °C vis	POLIMBE B	SPECI	At					
-	-	E ASTRONAN PROMI	101 1 1070			WATER	TRANS D	9 OB	(mbi		81.8018	wrt	BUT FODE	COS	O8518VA	TIONS					
						COLOR	1-1		+	3 -	050	-0	54 7	10	-		-				
	CASI	First T		1-				310	1			1		COMP	VIAN I		AMBRINT HIGHT				PHEASURID SOUND
	DURAL	IOM (CARD	DEFIH (m)		· · c	s	SIG	7 - AM		IC VOI		SAD DIN m	501	JND .), m(i	lum cm2				VELOCITY = 101
			TYPE				, ,,	-		AM OM	ALV - E	10'	1 10 t	A\$10		, ·		TAL P	HO ₂ N Hg st I		Oy-St gH
			STO	0000	-0	159	3185	2.5	64	007	2359	3 3	0000	143	75			-			
	1230	o' 'c	85	0000	-0	159	3184	9 25	64					143			1	- 1	1	1	
			510	0010	-01	158	3185	2.5	64	002	2355	7	0023	143	377						
	230	0 0	85	0010	-0	158	3185	3 25	164					143	377						
			STO	0020	-01	147	3212	25	85	002	2154	+5	0046	143	88						
	2.30		US.	1025	-0	143	3223	6 25	95					143	192						
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FUISE CODE .	I ID	NGITUDE 3	MARSDEN SQUARE	STATION TIA (GMT)	TEAR		FS FICINI MBI P	10 9	AI 1871/	WAVE OBSERVATIONS DIE HGT PER THE ME	COON TYPE	ouo	NODC STATION NUMBER
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SID	0020	-0164	3191	2569	0023076	0046	14376	107	023
085	0025	-0163	31952	2572	0025.10	00,0	14378	102	022
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OBS	0075	-0142	32393	2048			14410	127	030
STU	01 00	-0133	3324	2076	0012906	0191	14423		
085	0100	-0133	33238	2575			14423	114	030
STO	0125	-0122	1354	2700	0010593	0220	14437		
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OBS	02.00	-00/1	3+259	2756			1+488	097	023
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Woods Hole Oceanographic Institution

ATLAS - GAZETTEER COLLECTION

